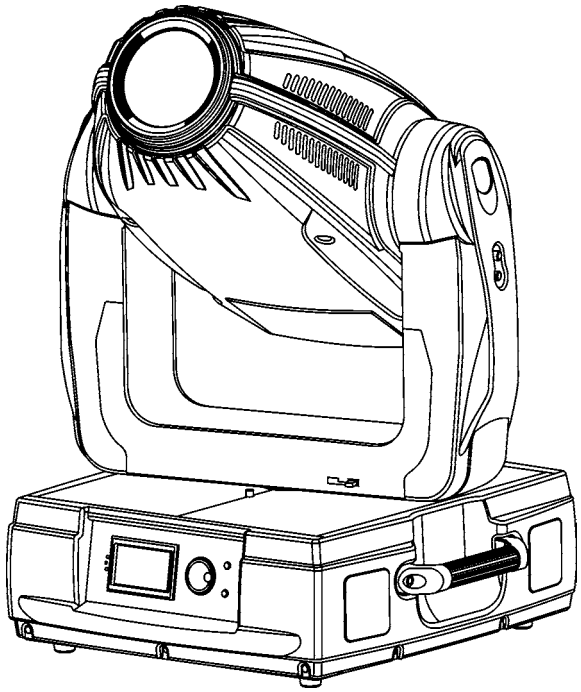
ROBE

Color Spot 1200 AT

Color Spot 1200E AT



aT series

USER MANUAL

Version: 5.8

ROBE® Lighting s.r.o. • Czech Republic • www.robe.cz

Color Spot 1200 AT

Color Spot 1200E AT

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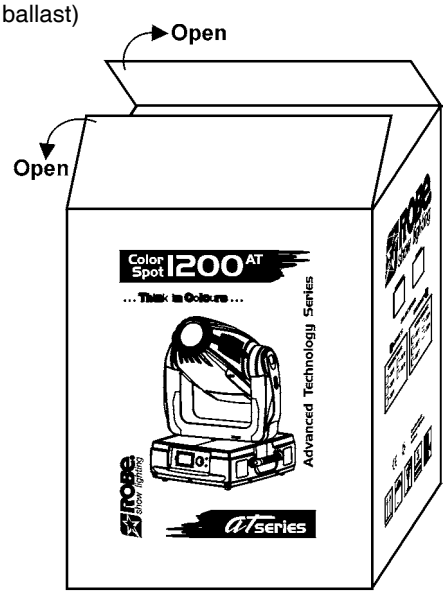
1. Unpacking

The ColorSpot 1200 AT (ColorSpot 1200E AT) cardboard box included items:

- Colorspot 1200 AT(magetic ballast) or Colorspot 1200E AT (electronic ballast)
- User manual (1piece)
- **Small paper box with:**
- Gobo-set 10 (1 piece)
- Mounting bracket Omega CL assembled (2 pieces)

The small paper box is situated in the top part of the cardboard box.



CAUTION! Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOU INITIAL START - UP!

2. Safety instructions

Every person involved with installation and maintenance of this device have to:
- be qualilfied
- follow the instructions of this manual

CAUTION! Be careful with your operations.
With a high voltage you can suffer a dangerous electric shock when touching the wires!

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Important:
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!

Make sure that the available voltage is not higher than stated on the rear panel.

Always plug in the power plug least. Make sure that the power-switch is set to off-position before you connect the device to the mains. The power-plug has to be accessable after installing the device.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.

The electric connection, repairs and servicing must be carried out by a qualified employee.
Do not connect this device to a dimmer pack.

Do not switch the fixture on and off in short intervals as this would reduce the lamp's life.

During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

Do not touch the device's housing bare hands during its operation (housing becomes hot)!
For replacement use lamps and fuses of same type and rating only.

CAUTION ! Avoid looking directly into the light source
EYEDAMAGES ! (meant especially for epileptics) !

3. Operating determinations

This device is a moving-head spot for creating decorative effects and was designed for indoor use only.

If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.

Never run the device without lamp!

Do not shake the device. Avoid brute force when installing or operating the device.

Never lift the fixture by holding it at the projector-head, as the mechanics may be damaged. Always hold the fixture at the transport handles.

When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!

The minimum distance between light-output and the illuminated surface must be more than 2.5 meters.

Make sure that the area below the installation place is blocked Always fix the fixture with an appropriate safety-rope. Fix the safety-rope at the correct holes only.

Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

The lamp must never be ignited if the objective-lens or any housing-cover is open, as discharge lamps may explose and emit a high ultraviolet radiation, which may cause burns.

The maximum ambient temperature 40° C must never be exceeded. Otherwise, the lamp is switched off and the fixture is out of operation for 5 minutes.

CAUTION! The lens has to be replaced when it is obviously damaged, so that its function is impaired, e. g. due to cracks or deep scratches!

Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation!

CAUTION! The lamp has to be replaced when it is damaged or deformed due to the heat!

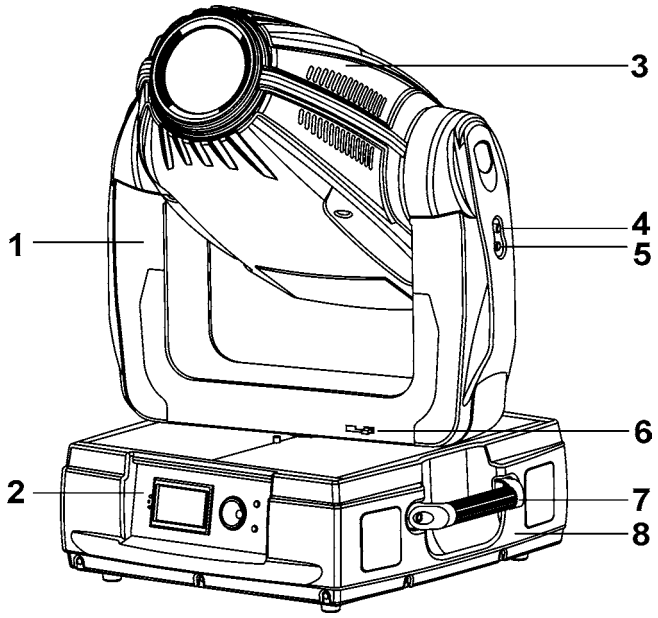
Please use the original packaging if the device is to be transported.

Please consider that unauthorized modifications on the device are forbidden due to safety reasons!

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, burns due to ultraviolet radiation, lamp explosion, crash etc.

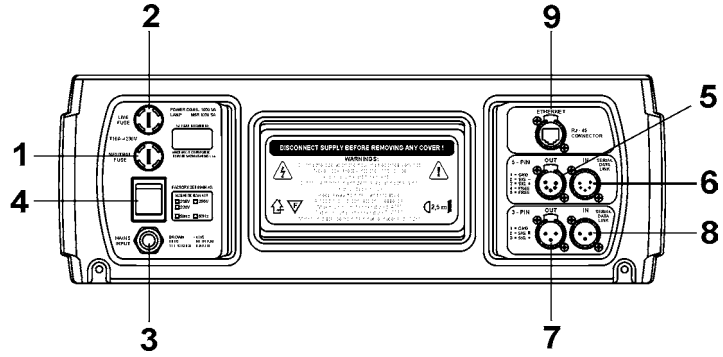
CAUTION! The head and yoke must be unlocked before operation! Check the pan/tilt locks!

4. Description of the fixture

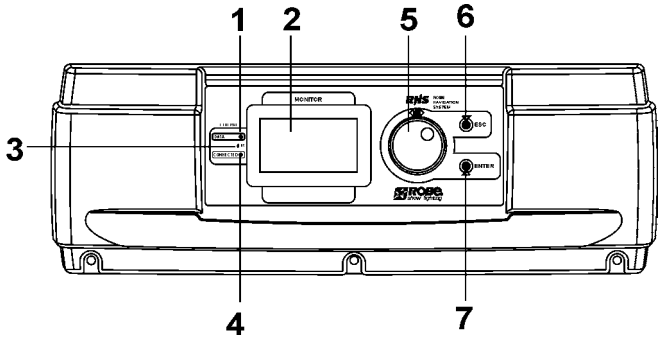


1 - Yoke
2 - Front panel
3 - Moving head
4 - Tilt lock button (red)
5 - Tilt unlock button (green)
6 - Pan lock/unlock lever
7 - Handle
8 - Base

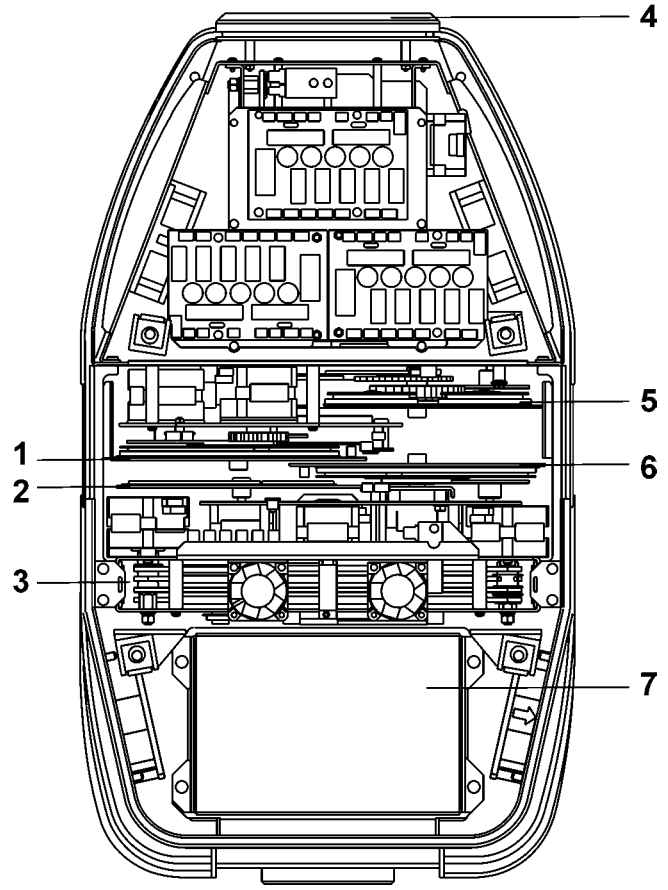
The head can be locked for transportation- the tilt lock button (4) is pushed and the pan lock/unlock lever (6) is in lock position. To unlock the head, press the tilt unlock button (5) and move the pan lock/unlock lever (6) to unlock position.



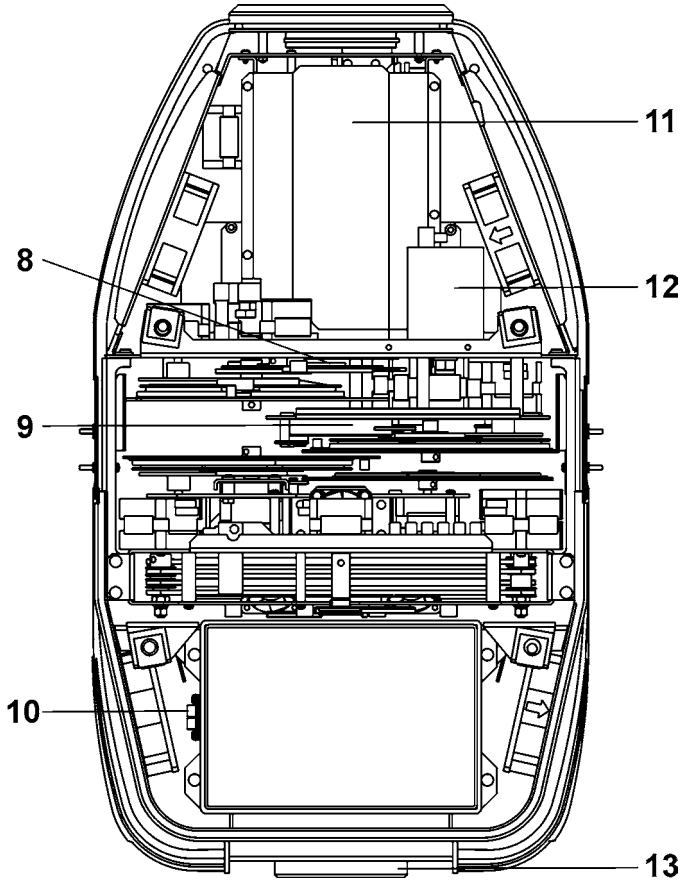
Rear panel of the base
1 - Neutral fuse holder
2 - Live fuse holder
3 - Power cord
4 - Power switch
5 - 5-pin DMX output
6 - 5-pin DMX input
7 - 3-pin DMX output
8 - 3-pin DMX input
9 - Ethernet input



Front panel of the base
1 - Network indicator
2 - Display
3 - Infra-red sensor
4 - Data-transfer indicator
5 - RNS encoder wheel
6 - Escape button
7 - Enter button



Head inside-top side
1 - Gobo wheel 2
2 - Colour wheel
3 - CMY/conver.filter module
4 - Objective
5 - Effect wheel
6 - Gobo wheel 1
7 - Lamp chamber



Head inside-bottom side
8 - Frost lamellas
9 - Iris
10 - Termostat
11 - Zoom/Focus module
12 - Igniter
13 - Lamp cover

5. Installation

5.1 Connection to the mains

Verify the power supply settings before applying power!

The factory settings are printed next to the power switch. If you wish to change the power supply settings, see the next chapter.
Installl a 3-prong grounding-type plug on the power cable (only for US version 208V AC/60Hz). The earth has to be connected!
If you have any doubts about proper installation, consult a qualified electrician.

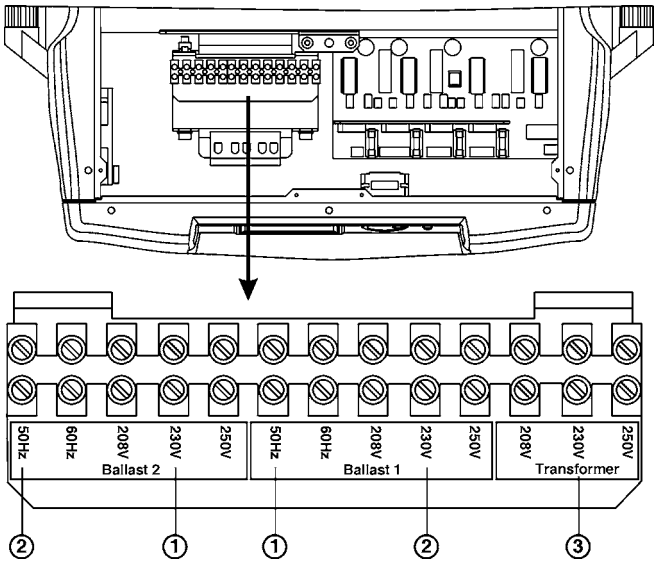
The occupation of the connection-cables is as follows:

Cable (EU)	Cable (US)-208V	Pin	International
Brown	Black	Live	L
Liht blue	White	Neutral	N
Yellow/ Green	Green	Earth	⏚

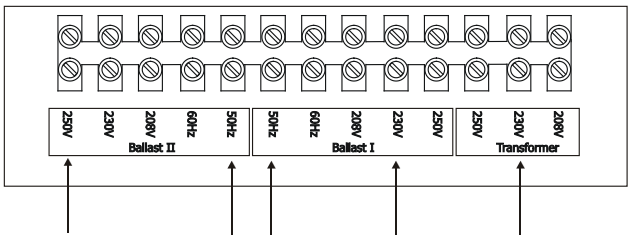
5.2 Changing the power supply settings

Magnetic ballast
The fixture contains 2 magnetics ballast connected in parallel .The wrong settings can cause poor performance or demage of the moving head.
Note: The US-version settings is 208V AC interphase, 60Hz.

If you want to change the power supply settings, follow the instructions:
1. Disconnect the fixture from AC power.
2. Remove the both top base covers by loosening the 12 screws.
3. Move both wires (1) and both wires (2) on the ballast connection block to the position according to the desired voltage and frequency.
4. Move the wire (3) on the transformer connection block to the position according to the desired voltage.
4. Close the base before applying AC power.



Note: In order to ensure a declared lamp lifetime at 230V/50Hz power supply, we recommend the following setting of the magnetic balllast:



Electronic ballast

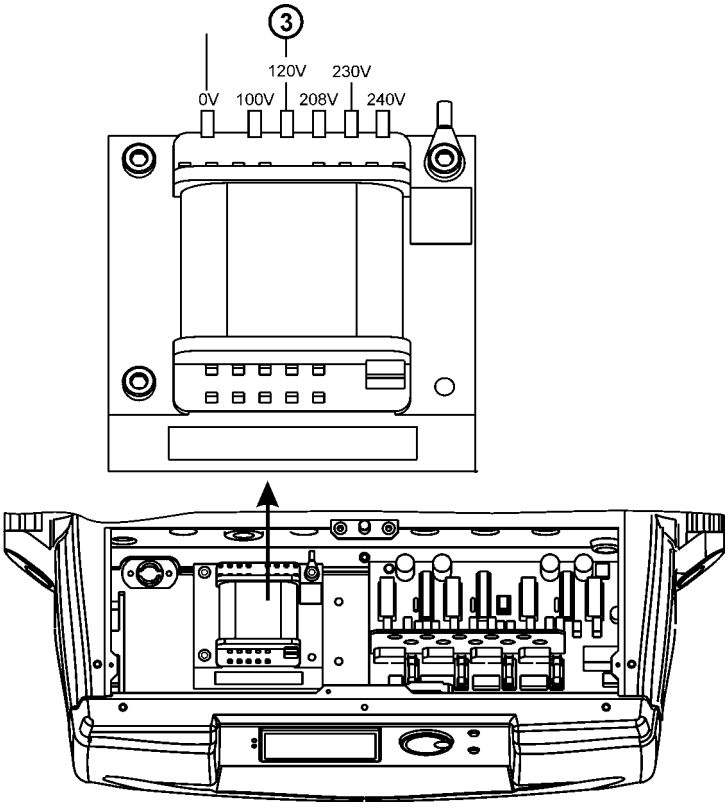
The operating range of the electronic ballast is 95 VAC-255 VAC. The transformer has to be set to the local AC voltage.

If you want to change the power supply settings, follow the instructions:

1. Disconnect the fixture from AC power.
2. Remove the both top base covers by loosening the 12 screws.
3. Move the wire (3) on the transformer connection block to the position according to the desired voltage.
4. Close the base before applying AC power.

Transformer connection:

Power supply settins: 120V/60Hz

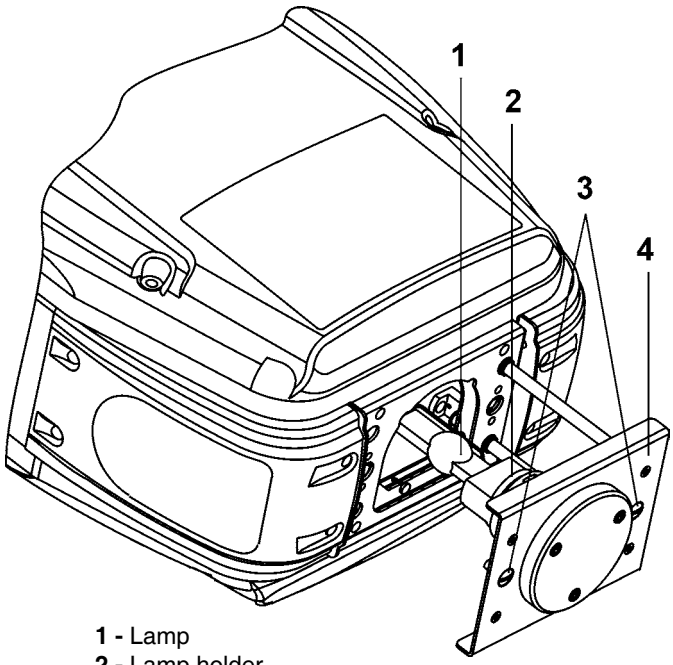


5.3 Fitting the lamp

DANGER ! Install the lamps with the device switched off only. Unplug from mains before !

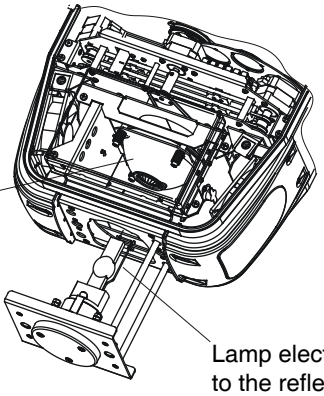
To insert the lamp (MSR 1200 SA):

1. Disconnect the fixture from power and allow it to cool.
2. Loosen the 2 quarter-turn fasteners marked „X, Y," on the lamp cover at the back of the head.
3. Gently pull the lamp cover with lamp holder out of the head.
4. Holding the lamp by its ceramic base, carefully pull the lamp straight out of the lamp socket.
5. Holding the new lamp by its ceramics base, gently insert the lamp to the lamp socket. Make sure that the lamp is installed tightly into the lamp socket. Do not install a lamp with a higher wattage! A lamp like this generates temperatures the device is not designed for. Damages caused by non-observance are not subject to warranty. Please follow the lamp manufacturer's notes! Do not touch the glass bulb bare hand during the installation!
6. Reinsert the lamp cover with the lamp holder and installed lamp back to the head and tighten the 2 quarter-turn fasteners again.
   Warning:if you feel any resistance during this action , check the lamp electrode position and use „A,B,C" screws to adjust right lamp position.Never put the lamp in by force otherwise you will bend the lamp electrode by the adge of the reflector! (See picture bellow)
7. Align the new lamp.
8. Reset „Lamp On Time" and „Lamp Strikes" counters in „Fixture information" menu.



1 - Lamp
2 - Lamp holder
3 - 2 quater-turn fasteners
4 - Lamp cover

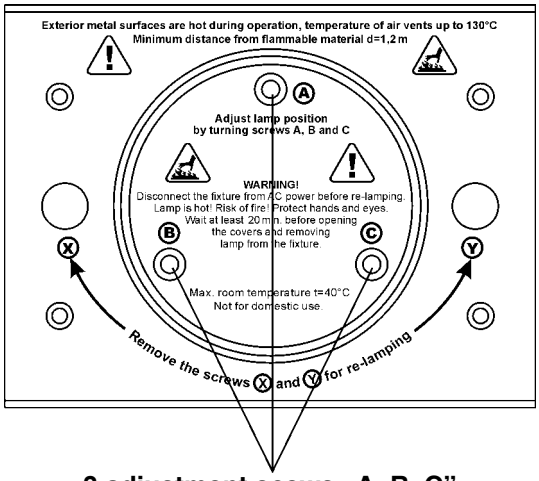
Do not operate this fixture with opened housing-cover!



5.4 Lamp adjustment

The lamp holder is aligned at the factory.
Due to differences between lamps, fine adjustment may improve light performance:

1. Switch on the fixture and after reset turn on the lamp.
2. Cancel all effects, open the shutter and focus the light on a flat surface (wall) using either DMX controller or function „Lamp adjustment" in „Special functions menu".
3. Center the hot-spot (the brightest part of the beam) using the 3 adjustment screws „A, B, C". Turn one screw at a time to drag the hot-spot, diagonally across the projected image. If you cannot detect a hot -spot, adjust the lamp until the light is even.
   To reduce a hot-spot, pull the lamp in by turning all three screws „A, B, C" clockwise 1/4-turn at a time until the light is evenly distributed.
   If the light is brighter around the edge than it is in the center, or if light output is low, the lamp is too far back in the reflector. „Push" the lamp out by turning the screws „A, B, C" counter-clockwise 1/4-turn at a time until the light is bright and evenly distributed.


Exterior metal surfaces are hot during operation, temperature of air vents up to 130°C
Minimum distance from flammable material d=1,2 m
Adjust lamp position
by turning screws A, B and C
WARNING!
Disconnect the fixture from AC power before re-lamping.
Lamp is hot! Risk of fire! Protect hands and eyes.
Wait at least 20 min. before opening
the covers and removing
lamp from the fixture.
Max. room temperature t=40°C
Not for domestic use.
Remove the screws X and Y for re-lamping
A
B
C
X
Y

3 adjustment scews „A, B, C"

5.5 Inserting/Exchanging gobos, colours and effects

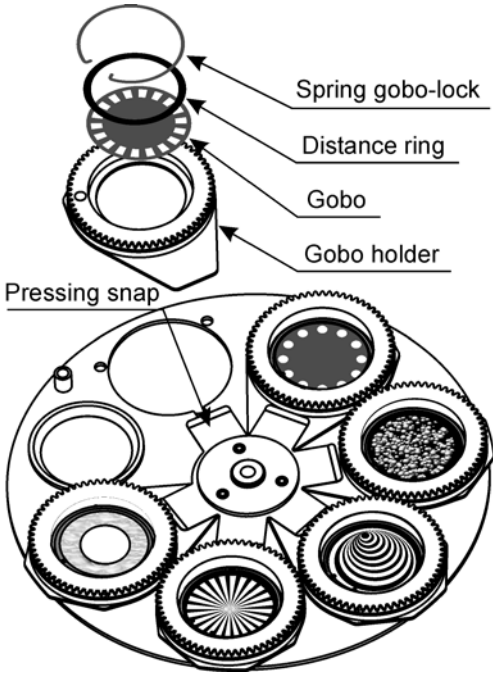
DANGER! Install the gobos, colours and prisms with the device switched off only. Unplug from mains before!

Turn off the lamp and allow it to cool for at least 10 minutes. Disconnect the fixture from power.

Open the top cover of the moving head by loosening the 4 quarter-turn fasteners on the top cover and follow the instructions below:

Rotating gobo-wheels:

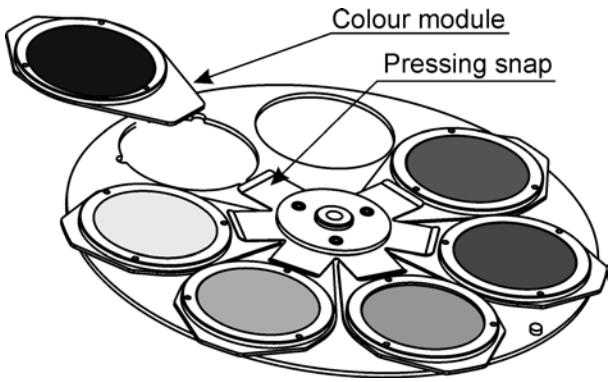
1. Gently bend out the gobo holder to release it from the fixative holes and eject it from the pressing snap.
2. Press the ends of the spring gobo-lock together with an appropriate tool and remove it.
   Do not touch the surface of the pattern of the glass gobos as the oils from your hands can damage the pattern.
3. Remove the distance ring and gobo and insert the new gobo (**glazy side towards the lamp**)with distance ring. Press the ends of the spring gobo-lock together and insert it in the front of the gobo.
4. Put the gobo holder back under the pressing snap and push it to the 3 fixative notches.



CAUTION! The gobo holder with the magnet must be placed in the same gobo position as it was placed before gobo replacement!

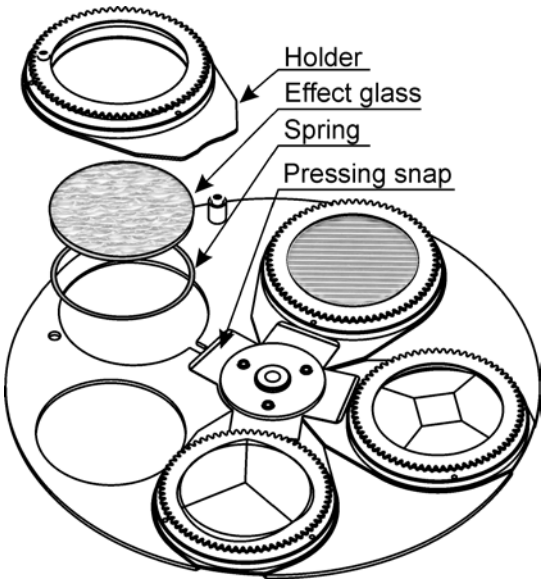
Colour-wheel:

1. Gently bend out the colour module to release it from the fixative holes and eject it from the pressing snap.
2. Put the new colour module back under the pressing snap and push it to the 3 fixative notches.



Effect-wheel:

1. Gently bend out the effect glass holder to release it from the fixative holes and eject it from the pressing snap.
2. Press the ends of the spring glass-lock together with an appropriate tool and remove it. Remove the glass and insert the new one.
3. Press the ends of the spring glass-lock together and insert it in the front of the glass.
4. Put the glass effect holder back under the pressing snap and push it to the 3 fixative notches.



CAUTION! The effect glass holder with the magnet must be placed in the same glass position as it was placed before glass replacement!

5.6 Rigging the fixture

DANGER TO LIFE!
Please consider the respective national norms during the installation!
The installation must only be carried out by an authorized dealer!

The installation of the fixture has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.

The installation must always be secured with a secondary safety attachment, e.g. an appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, derigging or servicing the fixture staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert after every four year in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are approved by a skilled person once a year.
Allow the fixture to cool for ten minutes before handling.
The projector should be installed outside areas where persons may walk by or be seated.

IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the

projector. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury and or damage to property.
The fixture has to be installed out of the reach of people.
If the fixture shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The fixture must never be fixed swinging freely in the room.

Caution: Fixtures may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do not install the fixture!
Before rigging make sure that the installation area can hold a minimum point load of 10 times the fixture's weight.

Danger of fire!
When installing the device, make sure there is no highly inflamma ble material (decoration articles, etc.) in between a distance of min. 1,2 m.

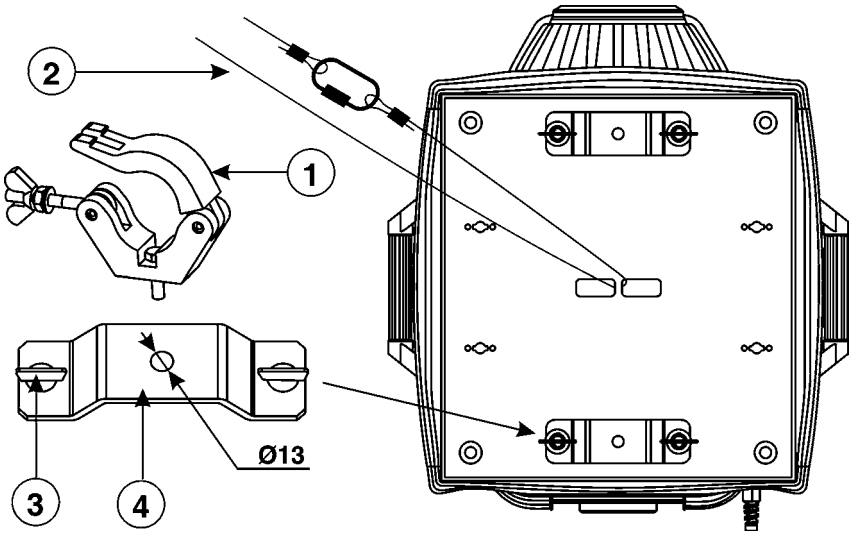
CAUTION! Use 2 appropriate clamps to rig the fixture on the truss.
Follow the instructions mentioned at the bottom of the base.
Make sure that the device is fixed properly!
Ensure that the structure (truss)
to which you are attaching the fixtures is secure.

The moving-head can be placed directly on the stage floor or rigged in any orientation on a truss without altering its operation characteristics .
The Omega holders can be placed in 4 positions on the bottom of the base. Use the clamps (not included in delivery) with screws M12.
For overhead use, always install a safety-rope that can hold at least 10 times the weight of the fixture. You must only use safety ropes with screw-on carabines. Pull the safety rope through the two apertures on the bottom of the base and over the trussing system etc. Insert the end in the carabine and tighten the fixation screw.

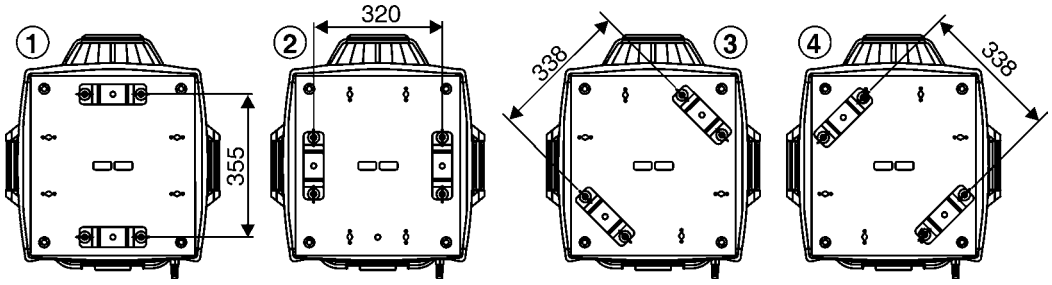
Fixation via the omega holders

1. Bolt each clamp (1) to the omega holder (4) with M12 bolt and lock nut through the hole in the holder.
2. Fasten the omega holders on the bottom of the base by inserting both quick-lock fasteners (3) into the holes of the base and tighten fully clockwise.
3. Fasten the safety-rope (2) through the two apertures on the bottom of the base and over the trussing system.

1 - Clamp
2 - Safety-rope
3 - Quick-lock fastener
4 - Omega holder



Possible omega holder 4 positions:



When installing fixtures side-by-side, avoid illuminating one fixture with another!

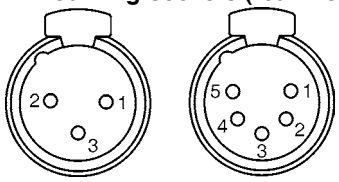
DANGER TO LIFE! Before taking into operation for the first time,
the installation has to be approved by an expert!

5.7 DMX-512 connection/connection between fixtures

The fixture is equipped with both 3-pin and 5-pin XLR sockets for DMX input and output.The sockets are wired in parallel. Only use a shielded twisted-pair cable designed for RS-485 and 3-pin or 5-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

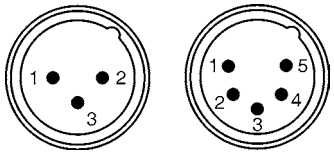
Occupation of the XLR-connection:

DMX - output
XLR mounting-sockets (rear view):



1 - Shield
2 - Signal (-)
3 - Signal (+)
4 - Not connected
5 - Not connected

DMX-input
XLR mounting-plugs (rear view):

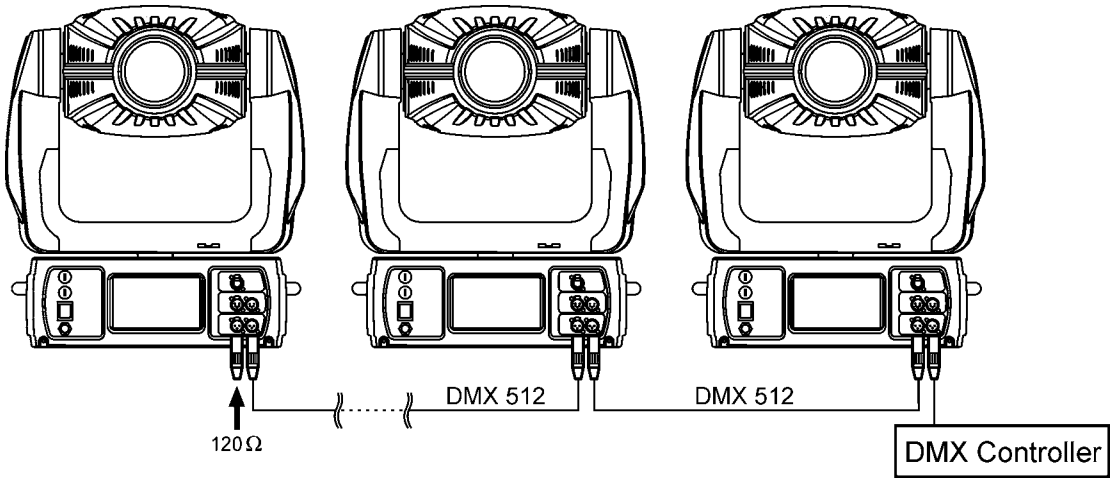


If you are using the standard DMX controllers, you can connect the DMX output of the controller directly with the DMX input of the first fixture in the DMX chain. If you wishhht to connect DMX controllers with other XLR outputs, you need to use adapter-cables.

Building a serial DMX chain:

Connect the DMX output of the first fixture in the DMX chain with the DMX input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected.

Caution: At the last fixture, the DMX cable has to be terminated with a terminator. Solder a 120 Ω resistor between Signal (–) and Signal (+) into a XLR plug and plug it in the DMX output of the last fixture.



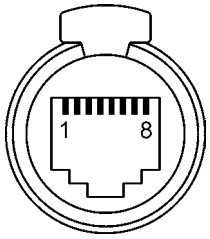
5.8 Ethernet connection

The fixtures on a data link are connected to the Ethernet with Art-Net communication protocol. The controlling software from PC (or lighting console) has to support Art-Net protocol.
Art-Net communication protocol is a 10 Base T Ethernet protocol based on the TCP/IP. Its purpose is to allow transfer of large amounts of DMX 512 data over a wide area using standard network technology.

IP address is the Internet protocol address. The IP uniquely identifies any node (fixture) on a network.
The Universe is a single DMX 512 frame of 512 channels.

The ColorSpot 1200 AT is equipped with 8-pin RJ- 45 socket for Ethernet input.Use a network cable category 5 (with four „twisted" wire pairs) and standard RJ-45 plugs in order to connect the fixture to the network.

RJ-45 socket (front view):



1- TD+
2- TD-
3- RX+
4- Not connected
5- Not connected
6- RX-
7- Not connected
8- Not connected

Patch cables that connect fixtures to the hubs or LAN sockets are wired 1:1, that is, pins with the same numbers are connected together:

pin	1	2	3	4	5	6	7	8
pin	1	2	3	4	5	6	7	8

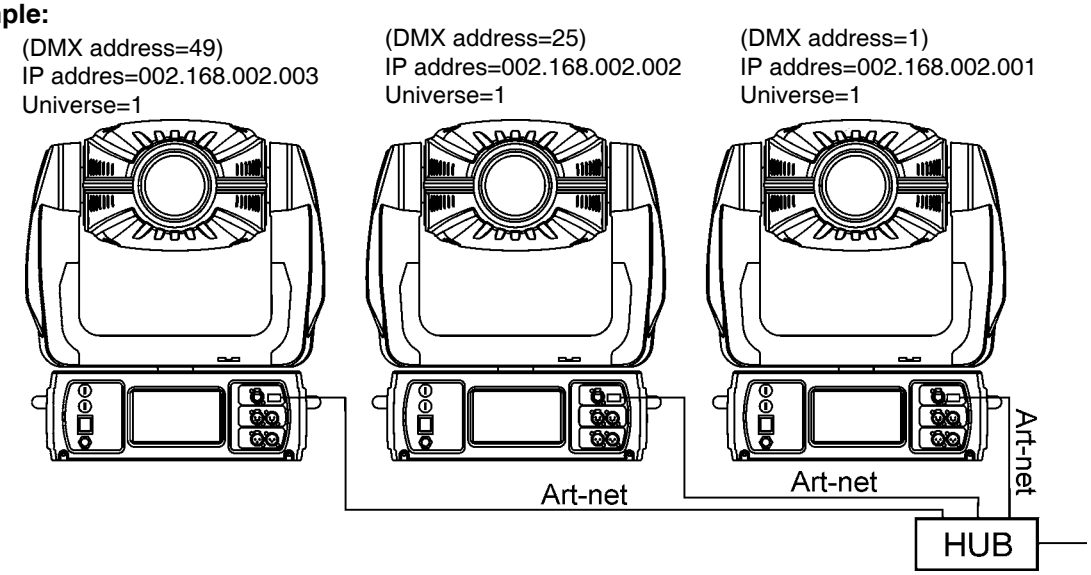
If only the fixture and the computer are to be inter-connected, no hubs or other active components are needed. A cross-cable has to be used:

pin	1	2	3	4	5	6	7	8
pin	3	6	1	8	7	2	5	4

Ethernet connection

Connect the Ethernet-inputs of all fixtures in the fixture chain with the network.
Option “Ethernet” has to be selected from „Set Ethernet Mode” menu on the fixture.
Set IP address (002.xxx.xxx.xxx / 010.xxx.xxx.xxx) and the Universe.

Example:



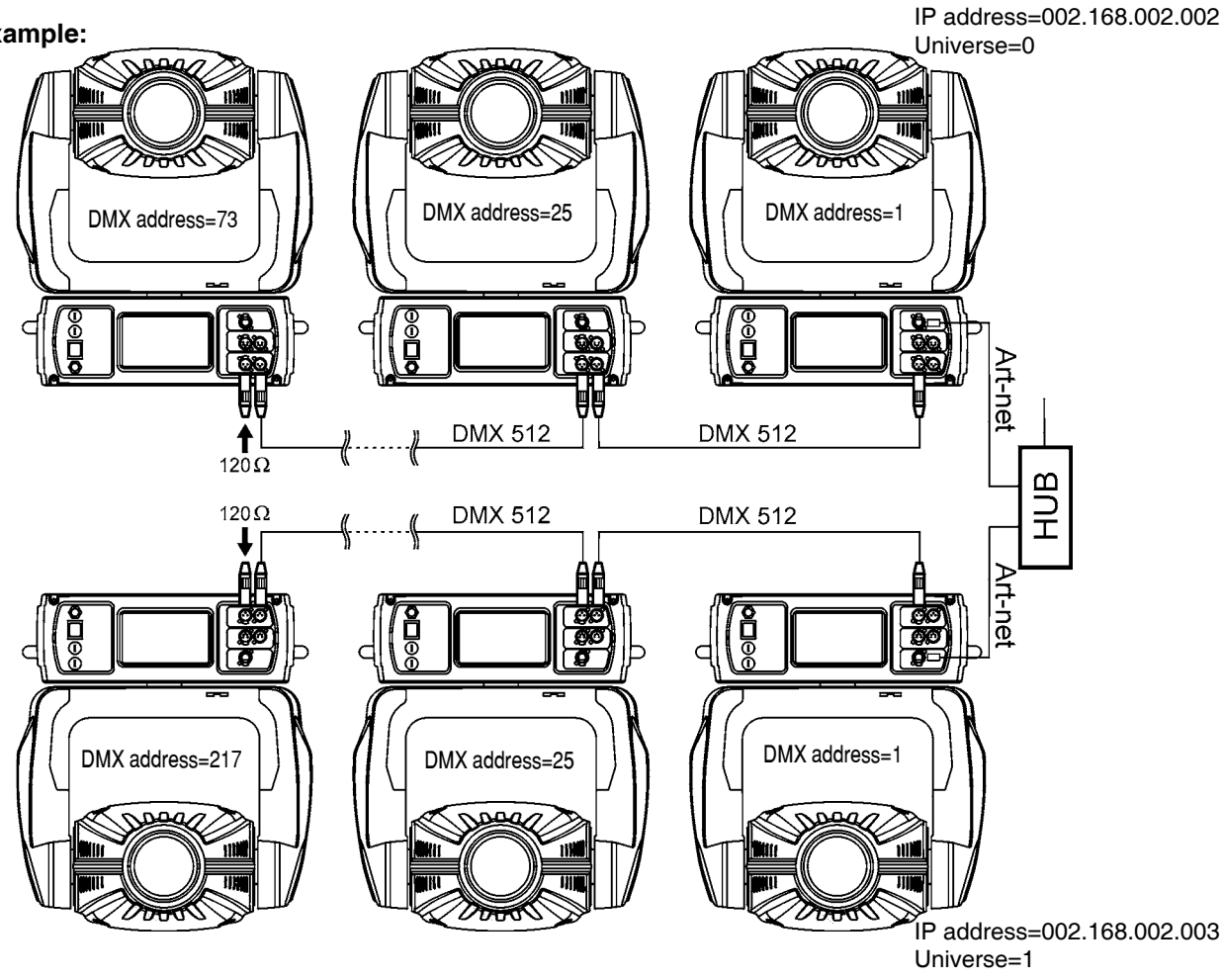
An advised PC setting: IP address: 002.xxx.xxx.xxx / 010.xxx.xxx.xxx (Different from fixture IP addresses)
NET mask: 255.0.0.0

Ethernet / DMX connection

Options „Ethernet/DMX” has to be selected from „Set Ethernet Mode” menu on the first fixture (connected to the network) in the fixture chain, next fixtures have standard DMX addresses.
Connect the Ethernet-input of the first fixture in the data chain with the network. Connect the DMX output of this fixture with the input of the next fixture until all fixtures are connected to the DMX chain.

Caution: At the last fixture, the DMX chain has to be terminated with a terminator. Solder a 120 Ω resistor between Signal (–) and Signal (+) into a XLR-plug and connect it in the DMX-output of the last fixture.

Example:



6. DMX protocol

Mode / Channel 1	2	3	Value	Function	Type of control
1	**1**	**19**	0 - 255	**Pan** Pan movement by 530°	proportional
2	**2**	**20**	0 - 255	**Pan Fine** Fine control of pan movement	proportional
3	**3**	**21**	0 - 255	**Tilt** Tilt movement by 280°	proportional
4	**4**	**22**	0 - 255	**Tilt fine** Fine control of tilt movement	proportional
5	**5**	**23**		**Pan/Tilt speed , Pan/Tilt time**	
			0	Max. speed (tracking mode)*	step
				P./T. speed-set Speed Mode in menu: Pan/Tilt Mode	
			1 - 255	Speed from max. to min. (vector mode)**	proportional
				P./T. time - set Time Mode in menu: Pan/Tilt Mode	
			1 - 255	Time from 0,1 s to 25,5 s. ***	proportional
6	**6**	**24**		**Power/Special functions**	
			0 - 9	Reserved	step
				To activate following functions, stop in DMX value for at least 3 s and shutter must be closed at least 3 s. („Shutter,Strobe" channel 23 (30,1) must be at range: 0-31 DMX).****	
			10 - 19	Autofocus On	step
			20 - 29	Autofocus Off	step
			30 - 49	Reserved	step
			50 - 59	Pan/Tilt speed mode	step
			60 - 69	Pan/Tilt time mode	step
			70 - 79	Blackout while pan/tilt moving	step
			80 - 89	Disabled blackout while pan/tilt moving	step
			90 - 99	Blackout while colour wheel moving	step
			100 - 109	Disabled blackout while colour wheel moving	step
			110 - 119	Blackout while gobo 1/gobo 2 moving	step
			120 - 129	Disabled blackout while gobo 1/gobo 2 moving	step
				To activate following functions,	
				stop in DMX value for at least 3 s.	
			130 - 139	Lamp On,reset(total reset except pan/tilt reset)	step
			140 - 149	Pan/Tilt reset	step
			150 - 159	Colour system reset	step
			160 - 169	Gobo system reset	step
			170 - 179	Dimmer/Strobe reset	step
			180 - 189	Focus/Zoom/Frost reset	step
			190 - 199	Iris/Effect/ reset	step
			200 - 209	Total reset	step
			210 - 229	Reserved	step
			230 - 239	Lamp Off	step
			240 - 255	Reserved	step

Notes: * Range 0-255 DMX at max.speed (0 DMX): pan=4.5 s
tilt=2.6 s

** Range 0-255 DMX at min. speed (255 DMX): pan=37min.10 s
tilt=19 min.34 s

*** Short times are not used for long tracks (e.g. 0.5s for track 0-255 DMX). Times are restricted by mechanical parameters of the fixture.

**** The switch-functions have priority to the equivalent functions in menu „Personality" but the setting by DMX is not saved to the memory (after switching the fixture on,the setting from menu „Personality" is loaded and after that can by changed with DMX value on the channel 6).

DMX protocol	**menu „Personality"**
10 - 19 Autofocus On	Autofocus -->On
20 - 29 Autofocus Off	Autofocus -->Off
50 - 59 Pan/Tilt speed mode	Pan/Tilt mode--->Speed Mode
60 - 69 Pan/Tilt time mode	Pan/Tilt mode--->Time Mode
70 - 79 Blackout while pan/tilt moving	Active blackout While-->Pan/Tilt Moving-->On
80 - 89 Disabled blackout while pan/tilt moving	Active blackout While-->Pan/Tilt Moving-->Off
90 - 99 Blackout while colour wheel moving	Active blackout While-->Colour Wheel Moving-->On
100 - 109 Disabled blackout while colour wheel moving	Active blackout While-->Colour Wheel Moving-->Off
110 - 119 Blackout while gobo1/gobo2 moving	Active blackout While-->Gobo Wheels Moving-->On
120 - 129 Disabled blackout while gobo1/gobo2moving	Active blackout While-->Gobo Wheels Moving-->Off

Mode / Channel 1	2	3	Value	Function	Type of control
				Pan/Tilt macro selection	
			0 - 9	Disabled pan/tilt macro	step
			10 - 31	Reserved	step
			32 - 63	Figure of circle (from small to large)	proportional
			64 - 95	Figure of horizontal eight (from small to large)	proportional
	7		96 - 127	Figure of vertical eight (from small to large)	proportional
			128 - 159	Figure of rectangle (from small to large)	proportional
			160 - 191	Figure of triangle (from small to large)	proportional
			192 - 223	Figure of star (from small to large)	proportional
			224 - 255	Figure of cross (from small to large)	proportional
				Pan/Tilt macro speed	
			0	No macro generation	step
	8		1 - 127	Macro generation from fast to slow-forwards	proportional
			128 - 129	No macro generation	step
			130 - 255	Macro generation from slow to fast-backwards	proportional
7	**9**	**7**		**Colour wheel**	
			0	Open/white	proportional
			18	Deep red	proportional
			37	Deep blue	proportional
			55	Green	proportional
			73	Orange	proportional
			91	6000 K temperature filter	proportional
			110	UV filter	proportional
			128 - 129	White	proportional
			130 - 139	Deep red	step
			140 - 149	Deep blue	step
			150 - 159	Green	step
			160 - 169	Orange	step
			170 - 179	6000 K temperature filter	step
			180 - 189	UV filter	step
			190 - 215	Forwards rainbow effect from fast to slow	proportional
			216 - 217	No rotation	step
			218 - 243	Backwards rainbow effect from slow to fast	proportional
			244 - 249	Random colour selection by audio control	step
				(Set microphone sensitivity in menu „Personality")	
			250 - 255	Auto random colour selection from fast to slow	proportional
8	**10**	**3**		**Cyan**	
			0 - 255	Cyan (0-white, 255-full cyan)	proportional
9	**11**	**4**		**Magenta**	
			0 - 255	Magenta (0-white, 255-full magenta)	proportional
10	**12**	**5**		**Yellow**	
			0 - 255	Yellow (0-white, 255-full yellow)	proportional
11	**13**	**6**		**Conversion temperature filter 3200K**	
			0 - 255	(0-5600K, 255-3200K)	proportional
				CMY Colour macros	
			0 - 3	No function	step
			4 - 7	Macro 1	step
			8 - 11	Macro 2	step
			12 - 15	Macro 3	step
			16 - 19	Macro 4	step
			20 - 23	Macro 5	step
			24 - 27	Macro 6	step
			28 - 31	Macro 7	step
	14		32 - 35	Macro 8	step
			36 - 39	Macro 9	step
			40 - 43	Macro 10	step
			44 - 47	Macro 11	step
			48 - 51	Macro 12	step
			52 - 55	Macro 13	step
			56 - 59	Macro 14	step
			60 - 63	Macro 15	step
			64 - 67	Macro 16	step
			68 - 71	Macro 17	step

Mode / Channel 1	2	3	Value	Function	Type of control
			72 - 75	Macro 18	step
			76 - 79	Macro 19	step
			80 - 83	Macro 20	step
			84 - 87	Macro 21	step
			88 - 91	Macro 22	step
			92 - 95	Macro 23	step
			96 - 99	Macro 24	step
			100 - 103	Macro 25	step
			104 - 107	Macro 26	step
			108 - 111	Macro 27	step
			112 - 115	Macro 28	step
			116 - 119	Macro 29	step
			120 - 123	Macro 30	step
			124 - 127	Macro 31	step
			128 - 131	Macro 32	step
			132 - 135	Macro 33	step
			136 - 139	Macro 34	step
			140 - 143	Macro 35	step
			144 - 147	Macro 36	step
			148 - 151	Macro 37	step
			152 - 155	Macro 38	step
			156 - 159	Macro 39	step
	14		160 - 163	Macro 40	step
			164 - 167	Macro 41	step
			168 - 171	Macro 42	step
			172 - 175	Macro 43	step
			176 - 179	Macro 44	step
			180 - 183	Macro 45	step
			184 - 187	Macro 46	step
			188 - 191	Macro 47	step
			192 - 195	Macro 48	step
			196 - 199	Macro 49	step
			200 - 203	Macro 50	step
			204 - 207	Macro 51	step
			208 - 211	Macro 52	step
			212 - 215	Macro 53	step
			216 - 219	Macro 54	step
			220 - 223	Macro 55	step
			224 - 227	Macro 56	step
			228 - 231	Macro 57	step
			232 - 235	Macro 58	step
			236 - 239	Macro 59	step
			240 - 243	Macro 60	step
			244 - 247	Macro 61	step
			248 - 251	Macro 62	step
			252 - 255	Macro 63	step
12	**15**			**Effect speed**	
			0 -255	From max. speed to min.speed *****	proportional
				Effect speed assigning	
			0 - 31	Dimmer + CMY filters + correction filter	step
	16		32 - 63	Dimmer	step
			64 - 95	CMY filters + correction filter	step
			96 - 255	No function	step
				Rotating gobo wheel 1	
				Index - set indexing on channel(s) 14 (18,19;9,10)	
			0 - 9	Open/hole	step
			10 - 13	Gobo 1 - Rainbow Chips (15030012)	step
13	**17**	**8**	14 - 17	Gobo 2 - Sun Man (15030013)	step
			18 - 21	Gobo 3 - Water Drops (15030014)	step
			22 - 25	Gobo 4 - Triangle Floating (15020123)	step
			26 - 29	Gobo 5 - Laser (15020124)	step
			30 - 33	Gobo 6 - Swirl Electric (15020125)	step

*****Standard speed: Range 0-255 DMX at min. speed (0 DMX): Cyan (magenta/yellow) = 3min, 35 s

Mode / Channel 1	2	3	Value	Function	Type of control
				<u>Rotation</u> - set rotation on channel(s) 14 (18,19;9,10)	
			34 - 37	Gobo 1 - Rainbow Chips (15030012)	step
			38 - 41	Gobo 2 - Sun Man (15030013)	step
			42 - 45	Gobo 3 - Water Drops (15030014)	step
			46 - 49	Gobo 4 - Triangle Floating (15020123)	step
			50 - 53	Gobo 5 - Laser (15020124)	step
			54 - 57	Gobo 6 - Swirl Electric (15020125)	step
				<u>Shaking gobos from slow to fast</u>	
				<u>Index</u> - set indexing on channel(s) 14 (18, 19;9,10)	
			58 - 69	Gobo 1 - Rainbow Chips (15030012)	proportional
			70 - 81	Gobo 2 - Sun Man (15030013)	proportional
			82 - 93	Gobo 3 - Water Drops (15030014)	proportional
			94 - 105	Gobo 4 - Triangle Floating (15020123)	proportional
			106 - 117	Gobo 5 - Laser (15020124)	proportional
13	**17**		118 - 129	Gobo 6 - Swirl Electric (15020125)	proportional
				<u>Shaking gobos from slow to fast</u>	
				<u>Rotation</u> - set rotation on channel(s) 14 (18,19;9,10)	
			130 - 141	Gobo 1 - Rainbow Chips (15030012)	proportional
			142 - 153	Gobo 2 - Sun Man (15030013)	proportional
			154 - 165	Gobo 3 - Water Drops (15030014)	proportional
			166 - 177	Gobo 4 - Triangle Floating (15020123)	proportional
			178 - 189	Gobo 5 - Laser (15020124)	proportional
			190 - 201	Gobo 6 - Swirl Electric (15020125)	proportional
			202 - 221	Forwards gobo wheel 1 rotation from fast to slow	proportional
			222 - 223	No rotation	
			224 - 243	Backwards gobo wheel 1 rotation from slow to fast	proportional
			244 - 249	Random gobo 1 selection by audio control	step
				(Set microphone sensitivity in menu „Personality")	
			250 - 255	Auto random gobo 1 selection from fast to slow	proportional
				Gobo 1 indexing and rotation	
				<u>Gobo indexing</u> - set position on channel 13 (17;8)	
			0 - 255	Gobo indexing	proportional
14	**18**	**9**		**<u>Gobo rotation</u> - set position on channel 13 (17;8)**	
			0	No rotation	step
			1 - 127	Forwards gobo rotation from fast to slow	proportional
			128 - 129	No rotation	step
			130 - 255	Backwards gobo rotation from slow to fast	proportional
				Gobo 1 fine indexing and rotation	
	19	**10**		**(set position on channel 13 (17;8))**	
			0 - 255	Fine indexing (rotating)	proportional
				Rotating gobo wheel 2	
				<u>Index</u> - set indexing on channel(s) 16 (21, 22;12,13)	
			0 - 9	Open/hole	step
			10 - 13	Gobo 1 - Diamante Spot(15040020)	step
			14 - 17	Gobo 2 - Wheel (15020126)	step
			18 - 21	Gobo 3 - Space Tunel (15020127)	step
			22 - 25	Gobo 4 - Bubbles 1 (15020128)	step
			26 - 29	Gobo 5 - 12 Dots (15020129)	step
			30 - 33	Gobo 6 - Radial Dashes (15020130)	
				<u>Rotation</u> - set rotation on channel(s) 16 (21, 22;12,13)	
			34 - 37	Gobo 1 - Diamante Spot (15040020)	step
			38 - 41	Gobo 2 - Wheel (15020126)	step
15	**20**	**11**	42 - 45	Gobo 3 - Space Tunel (15020127)	step
			46 - 49	Gobo 4 - Bubbles 1 (15020128)	step
			50 - 53	Gobo 5 - 12 Dots (15020129)	step
			54 - 57	Gobo 6 - Radial Dashes (15020130)	step
				<u>Shaking gobos from slow to fast</u>	
				<u>Index</u> - set indexing on channel(s) 16 (21, 22;12,13)	
			58 - 69	Gobo 1 - Diamente Spot (15040020)	proportional
			70 - 81	Gobo 2 - Wheel (15020126)	proportional
			82 - 93	Gobo 3 - Space Tunel (15020127)	proportional
			94 - 105	Gobo 4 - Bubbles 1 (15020128)	proportional
			106 - 117	Gobo 5 - 12 Dots (15020129)	proportional
			118 - 129	Gobo 6 - Radial Dashes(15020130)	proportional

Mode / Channel 1	2	3	Value	Function	Type of control
				Shaking gobos from slow to fast	
				Rotation - set rotation on channel(s) 16(21,22;12,13)	
			130 - 141	Gobo 1 - Diamante Spot (15040020)	proportional
			142 - 153	Gobo 2 - Wheel (15020126)	proportional
			154 - 165	Gobo 3 - Space Tunel (15020127)	proportional
			166 - 177	Gobo 4 - Bubbless (15020128)	proportional
15	**20**	**11**	178 - 189	Gobo 5 - 12 Dots (15020129)	proportional
			190 - 201	Gobo 6 - Radial Dashes (15020130)	proportional
			202 - 221	Forwards gobo wheel 2 rotation from fast to slow	proportional
			222 - 223	No rotation	step
			224 - 243	Backwards gobo wheel 2 rotation from slow to fast	proportional
			244 - 249	Random gobo 2 selection by audio control	step
				(Set microphone sensitivity in menu „Personality")	
			250 - 255	Auto random gobo 2 selection from fast to slow	proportional
				Gobo 2 indexing and rotation	
				Gobo indexing - set position on channel 15 (20;11)	
			0 - 255	Gobo indexing	proportional
				Gobo rotation - set position on channel 15 (20;11)	
16	**21**	**12**	0	No rotation	step
			1 - 127	Forwards gobo rotation from fast to slow	proportional
			128 - 129	No rotation	step
			130 - 255	Backwards gobo rotation from slow to fast	proportional
				Gobo 2 fine indexing and rotation	
	22	**13**		**(set position on channel 15 (20))**	
			0 - 255	Fine indexing (rotating)	proportional
				Effect wheel	
				Index - set indexing on channel(s) 18 (24, 25;15)	
			0 - 19	Open/hole	step
			20 - 39	3-facet prism	step
			40 - 59	5-facet prism	step
			60 - 79	Estriado	step
			80 - 99	Diamante	step
				Rotation - set rotation on channel(s) 18 (24, 25;15)	
			100 - 119	3-facet prism	step
			120 - 139	5-facet prism	step
			140 - 159	Estriado	step
			160 - 179	Diamante	step
				Prism/gobo macros	
			180 - 183	Macro 1	step
			184 - 187	Macro 2	step
17	**23**	**14**	188 - 191	Macro 3	step
			192 - 195	Macro 4	step
			196 - 199	Macro 5	step
			200 - 203	Macro 6	step
			204 - 207	Macro 7	step
			208 - 211	Macro 8	step
			212 - 215	Macro 9	step
			216 - 219	Macro 10	step
			220 - 223	Macro 11	step
			224 - 227	Macro 12	step
			228 - 231	Macro 13	step
			232 - 235	Macro 14	step
			236 - 239	Macro 15	step
			240 - 243	Macro 16	step
			244 - 249	Random Effect selection by audio control (Set microph.sensit.)	step
			250 - 255	Auto random Effect selection from fast to slow	proportional
				Effect indexing and rotation	
				Effect indexing - set position on channel 17 (23;14)	
			0 - 255	Effect indexing	proportional
				Effect rotation - set position on channel 17 (23;14)	
18	**24**	**15**	0	No rotation	step
			1 - 127	Forwards Effect rotation from fast to slow	proportional
			128 - 129	No rotation	step
			130 - 255	Backwards Effect rotation from slow to fast	proportional

Mode / Channel 1	2	3	Value	Function	Type of control
	25			**Fine effect indexing and rotation (set position on channel 17 (23))**	
			0 - 255	Fine indexing (rotating)	proportional
				Frost	
			0	Open	step
			1 - 179	Frost from 0% to 100%	proportional
19	**26**		180 - 189	100% frost	proportional
			190 - 211	Pulse closing from slow to fast	proportional
			212 - 233	Pulse opening from fast to slow	proportional
			234 - 255	Ramping from fast to slow	proportional
				Iris	
			0	Open	step
			1 - 179	From max. diameter to min. diameter	proportional
			180 - 191	Closed	step
				Pulse effects with Iris blackout	
			192 - 203	Pulse opening from slow to fast	proportional
20	**27**	**16**	204 - 215	Pulse closing from fast to slow	proportional
			216 - 217	Random pulse opening (fast)	step
			218 - 219	Random pulse opening (slow)	step
			220 - 221	Random pulse closing (fast)	step
			222 - 223	Random pulse closing (slow)	step
				Pulse effects with Iris blackout and zoom	
			224 - 239	Pulse opening from slow to fast	proportional
			240 - 255	Pulse closing from fast to slow	proportional
21	**28**	**18**		**Zoom**	
			0 - 255	Zoom from 42° to 13°	proportional
22	**29**	**17**		**Focus**	
			0 - 255	Continuous adjustment from far to near	proportional
				Shutter, strobe	
			0 - 31	Shutter closed, Lamp power reduced after 10 s to 700W	step
			32 - 63	Shutter open, Full lamp power	step
			64 - 95	Strobe-effect from slow to fast (max.15 flashes/s)	proportional
			96 - 127	Shutter open, Lamp power reduced to 700 W	step
23	**30**	**1**	128 - 143	Opening pulse in sequences from slow to fast	proportional
			144 - 159	Closing pulse in sequences from fast to slow	proportional
			160 - 191	Shutter open, Electronic strobing „ZAP” from slow to fast (from 7 to 33 flashes/s)	proportional
			192 - 223	Random strobe-effect from slow to fast	proportional
			224 - 255	Shutter open, Full lamp power	step
				Note: underlined characters - ColorSpot 1200E AT only	
				Dimmer intensity	
24	**31**	**2**	0 - 255	Dimmer intensity from 0% to 100% (In range 0-3 DMX, lamp power reduced to 700 W after 10 s)	proportional
	32			**Fine dimmer intensity**	
			0 - 255	Dimmer intensity fine	proportional

7. Controller mode

The fixtures are individually addressed on a data link and connected to the controller. The fixtures respond to the DMX signal from the controller.

7.1 DMX addressing

There are 512 available channels on DMX link. Every fixture on DMX link must have a DMX start address, which is defined as the first channel from which the fixture will respond to the controller.
If you set, for example, for the ColorSpot 1200 AT the start address to channel 25, the ColorSpot 1200 AT will use the channels 25 to 48 for control (if Mode 1 is selected from „DMX Preseting" menu).
Please, be sure that you don't have any overlapping channels in order to control each ColorSpot 1200 AT correctly and independently from any other fixture on the DMX data link.
If two, three or more ColorSpot 1200 AT are addressed similarly, they will work similarly.

Controlling:

After having addressed all ColorSpot 1200 AT , you may now start operating these via your lighting controller.
Note: After switching on, the ColorSpot 1200 AT will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the display will start to flash with actually address.

7.2 Remotely controllable functions

Lamp

The ColorSpot 1200 AT is to be operated with a Philips MSR 1200 SA lamp.
A relay inside of the ColorSpot 1200 AT allows you to switch on and off the lamp via the control panel or via your DMX-controller without affecting the rest of the lighting.
Note: It is also important to note, that the discharge lamp is cold restrike types, that means, that they have to be cold before re-striking. For this reason, you have to wait at least 5 minutes after having switched off the lamp before you can switch it back on again. If you try to switch On the lamp within 5 minutes after having switched it Off, the Color-Spot 1200 AT will store this information and automatically ignite the lamp when the 5 minutes period has expired.

CMY-colours mixing system

The CMY color mixing system is based on graduated cyan, magenta, and yellow color filters. A continuous range of colors may be achieved by varying the amount of each filter from 0 to 100%.
Colour temperature correction filtre lowers the colour temperature from 5600K to 3200 K.

Colour wheel

The ColorSpot 1200 AT features a colour wheel with 4 colour positions, UV filter and 6000 K temp. filter and the hole (open). It is also possible to rotate the colour wheel continuously at different speeds, the so-called „Rainbow effect" is created. Auto random colour selection,random colour selection by audio control is possible.

Rotating gobo wheel 1

The rotating gobo wheel includes 6 dichroic glass gobos rotating in both directions at different speeds. All rotating gobos are replaceable and fine indexable.
Rotating gobo wheel can continuously rotate in both directions from slow to fast speed.

Rotating gobo wheel 2

The rotating gobo wheel includes 1 glass gobo and 5 dichroic glass gobos rotating in both directions at different speeds. All rotating gobos are replaceable and fine indexable.
Rotating gobo wheel can continuously rotate in both directions from slow to fast speed.

Effect wheel

This wheel provides 3-facet prism,5-facet prism and 2 glass effects rotating in both directions at different speeds.Prism/ gobo macros are possible.

Iris

Motorized adjustable iris,wide range of variable pulse effects.

Frost

Frost module provides variable frost for fine frosting.

Focus-multistep zoom

Motorized focus enables the beam to be focused anywhere on stage, provided by the special multistep zoom with range 13°- 42°.

Dimmer/Shutter/Strobe

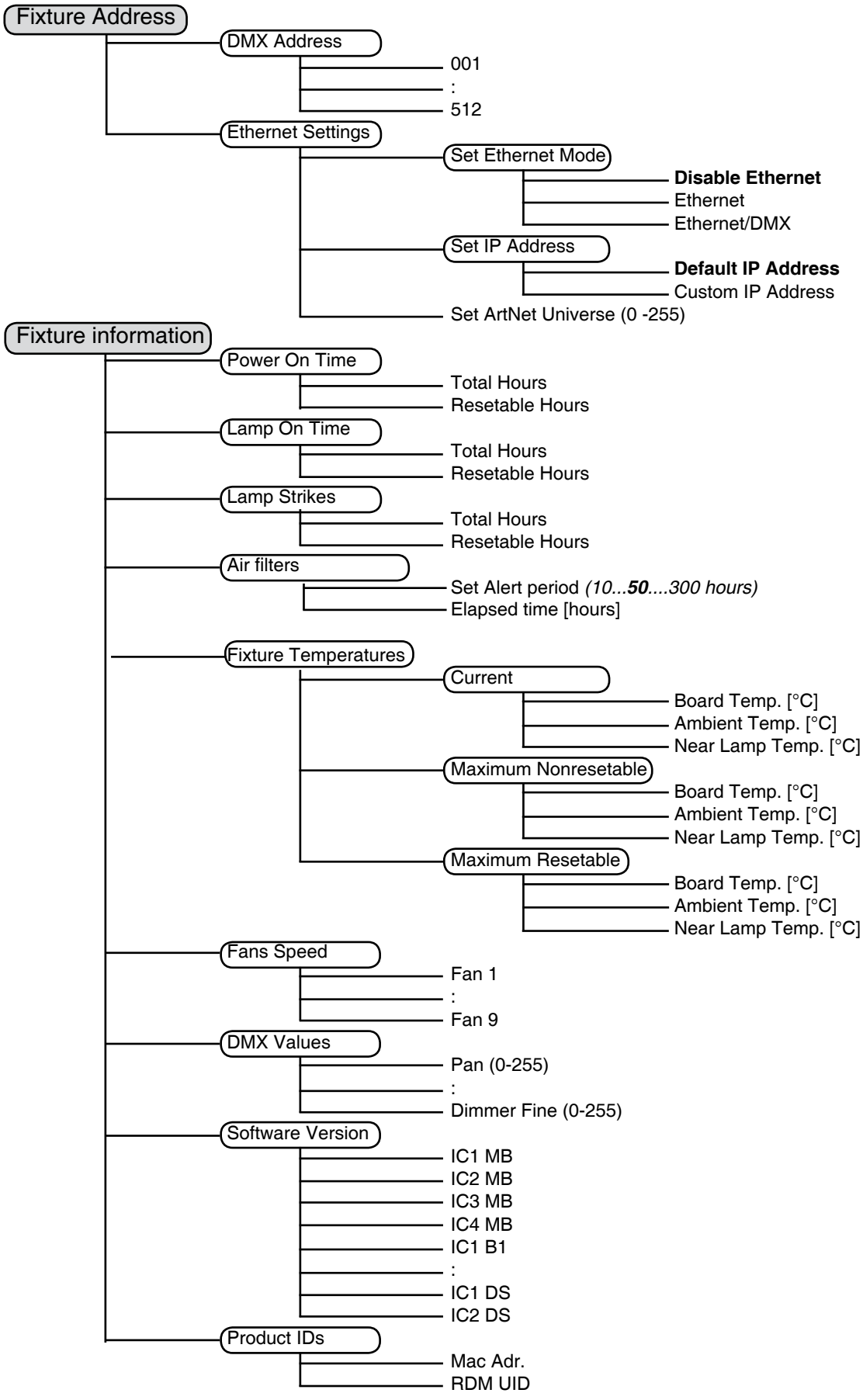
Smooth 0 - 100 % dimming is provided by the combined mechanical dimmer/shutter unit. This unit may also be used for strobe effect (1 - 15 flashes per second)

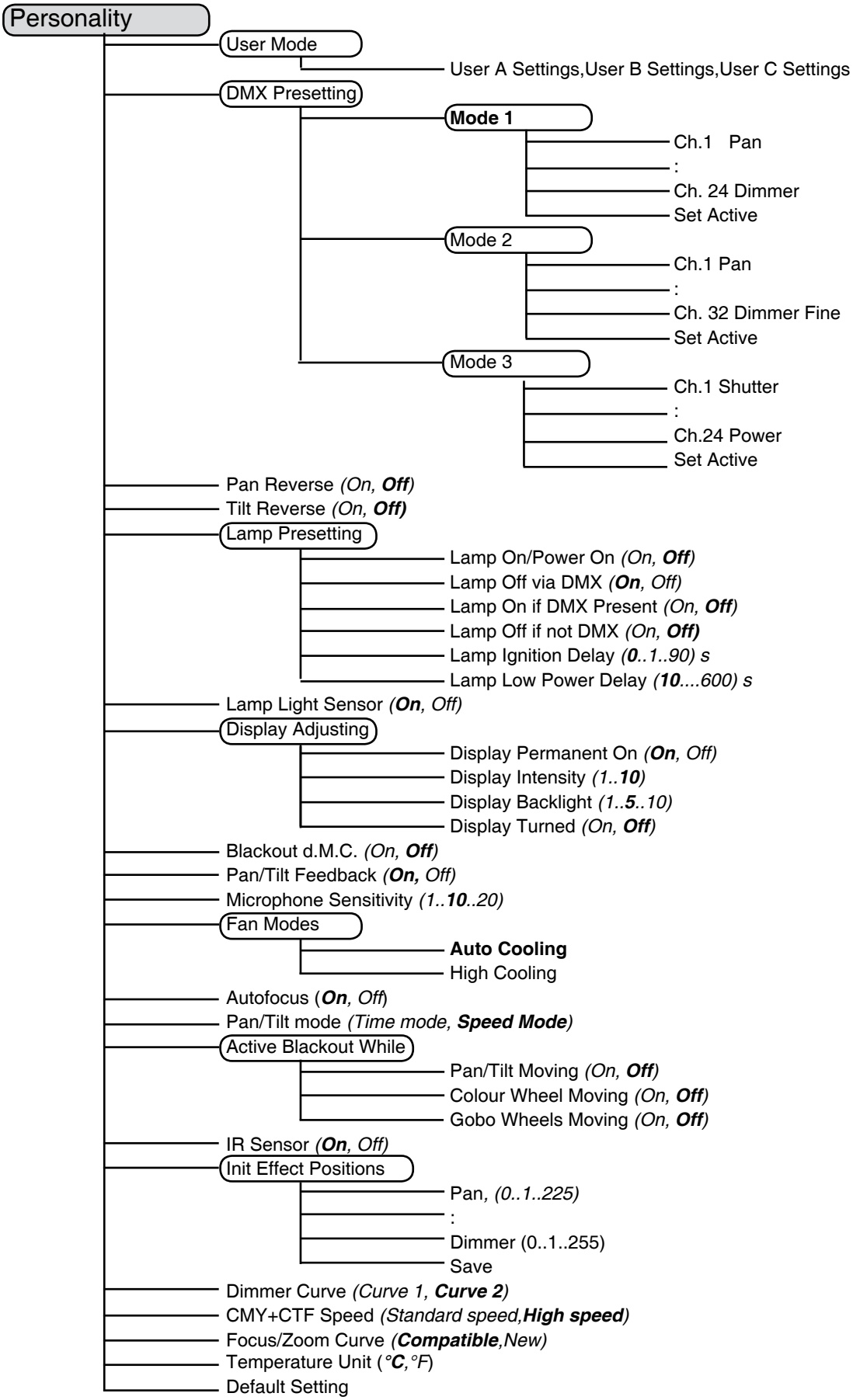
Fans

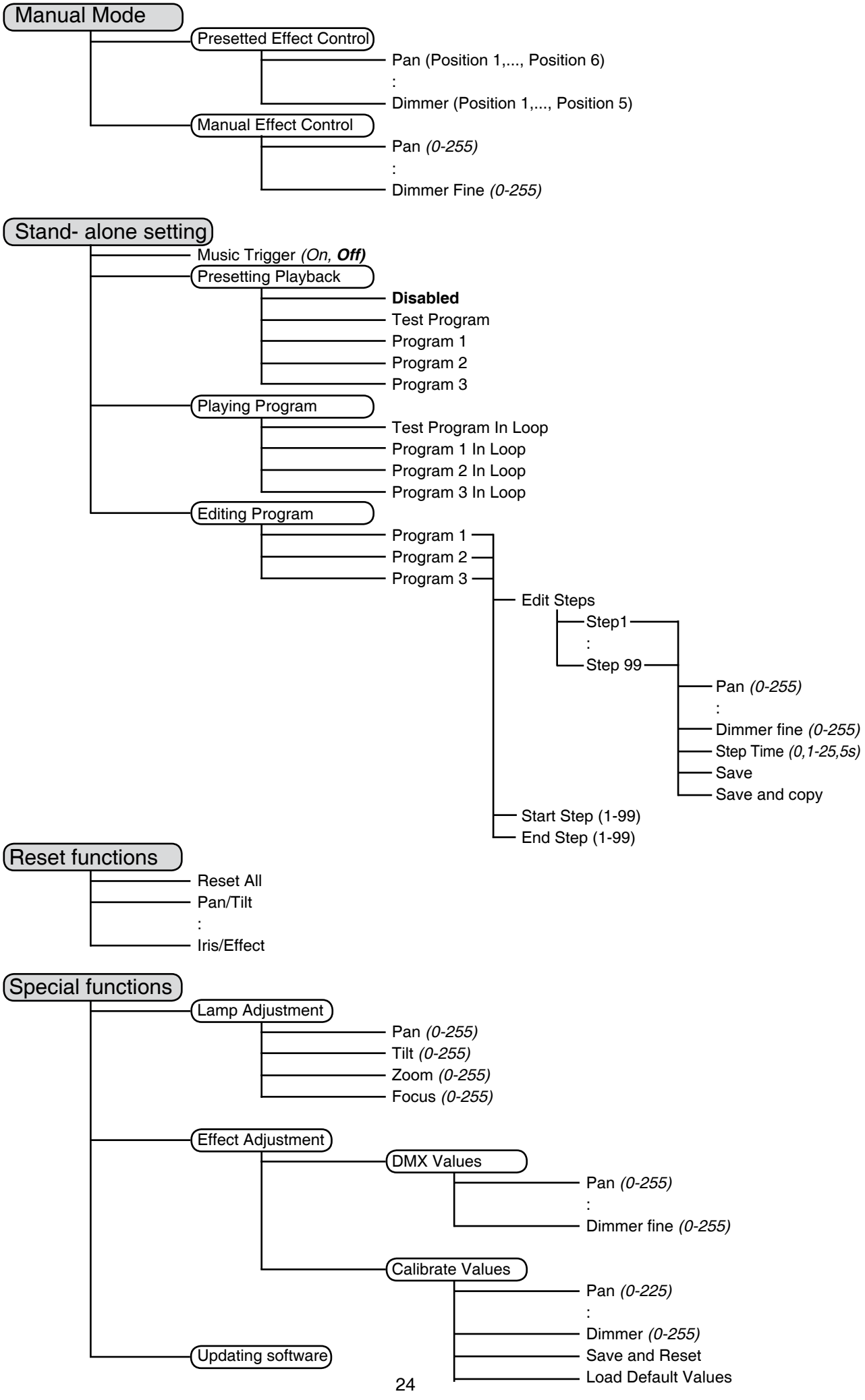
By the Control Board using the **„Fan Modes"** function you can choose the 2 types of the fan speed operating modes.

8. Control menu map

Note: Default settings = **Bold print**




Personality
User Mode
User A Settings,User B Settings,User C Settings
DMX Presetting
Mode 1
Ch.1 Pan
:
Ch. 24 Dimmer
Set Active
Mode 2
Ch.1 Pan
:
Ch. 32 Dimmer Fine
Set Active
Mode 3
Ch.1 Shutter
:
Ch.24 Power
Set Active
Pan Reverse (On, Off)
Tilt Reverse (On, Off)
Lamp Presetting
Lamp On/Power On (On, Off)
Lamp Off via DMX (On, Off)
Lamp On if DMX Present (On, Off)
Lamp Off if not DMX (On, Off)
Lamp Ignition Delay (0..1..90) s
Lamp Low Power Delay (10....600) s
Lamp Light Sensor (On, Off)
Display Adjusting
Display Permanent On (On, Off)
Display Intensity (1..10)
Display Backlight (1..5..10)
Display Turned (On, Off)
Blackout d.M.C. (On, Off)
Pan/Tilt Feedback (On, Off)
Microphone Sensitivity (1..10..20)
Fan Modes
Auto Cooling
High Cooling
Autofocus (On, Off)
Pan/Tilt mode (Time mode, Speed Mode)
Active Blackout While
Pan/Tilt Moving (On, Off)
Colour Wheel Moving (On, Off)
Gobo Wheels Moving (On, Off)
IR Sensor (On, Off)
Init Effect Positions
Pan, (0..1..225)
:
Dimmer (0..1..255)
Save
Dimmer Curve (Curve 1, Curve 2)
CMY+CTF Speed (Standard speed,High speed)
Focus/Zoom Curve (Compatible,New)
Temperature Unit (°C,°F)
Default Setting
Lamp On/Off (On, Off)
Test sequences
Mode 1
Pan,Tilt,Zoom,Focus (0-255)
Run Test Program
Mode 2
Run Test Program


Manual Mode
Presetted Effect Control
Pan (Position 1,..., Position 6)
:
Dimmer (Position 1,..., Position 5)
Manual Effect Control
Pan (0-255)
:
Dimmer Fine (0-255)
Stand- alone setting
Music Trigger (On, Off)
Presetting Playback
Disabled
Test Program
Program 1
Program 2
Program 3
Playing Program
Test Program In Loop
Program 1 In Loop
Program 2 In Loop
Program 3 In Loop
Editing Program
Program 1
Program 2
Program 3
Edit Steps
Step1
:
Step 99
Pan (0-255)
:
Dimmer fine (0-255)
Step Time (0,1-25,5s)
Save
Save and copy
Start Step (1-99)
End Step (1-99)
Reset functions
Reset All
Pan/Tilt
:
Iris/Effect
Special functions
Lamp Adjustment
Pan (0-255)
Tilt (0-255)
Zoom (0-255)
Focus (0-255)
Effect Adjustment
DMX Values
Pan (0-255)
:
Dimmer fine (0-255)
Calibrate Values
Pan (0-225)
:
Dimmer (0-255)
Save and Reset
Load Default Values
Updating software

9. Control menu

The control panel situated on the front panel of the base offers several features. You can simply set the DMX address, read the number of the lamp or unit hours, switch On and Off the lamp, run test, make a reset and also use many functions for setting fixture behaviour.

Control elements on the control board:

[RNS] encoder wheel-moves between menu items on the the same level, scrolls between values.
[ESC] button-leaves menu without saving changes
[ENTER] button-enters menu, confirms adjusted values and leaves menu

After switching the fixture on, the display shows the initial screen:

Press [ENTER], the display shows current address:

The main menu of the control panel is accessed by pressing [ENTER] button. To browse through the menu, rotate [RNS] wheel. To select a function or submenu, press [ENTER] button. Presetted options are displayed negative.

9.1 Fixture Address

Use this menu to set the DMX address.

DMX Address - Select this submenu to set DMX start address.

Ethernet Settings - Select this submenu to set the fixture for Ethernet operating.

- **Set Ethernet Mode** - Select this submenu to select Ethernet operating mode:
  - **Disable Ethernet** - disables network operating.
  - **Ethernet** - Data are received to the Ethernet input of the fixture - every fixture from fixture chain has to be connected to the network.
  - **Ethernet/DMX** - Data go from Ethernet input „through" the fixture to the DMX output of the fixture- it is possible to connect the next fixture to DMX output and to make a DMX chain.
- **Set IP Address** - Select this submenu to set IP address.IP address is the Internet protocol address. The IP uniquely identifies any node (fixture) on a network. There can't be 2 fixtures with the same IP address on the network!
  - **Default IP Address** - Presetted IP address, you can edit only first number of IP address (2 or 10) e.g. **002**.019.052.086.
  - **Custom IP Address** - The option enables edit all numbers of IP address e.g. **002**.**019**.**052**.**086**.
    To set the custom IP address:
    1. Select „Custom IP Address" and press [ENTER].
    2. Use RNS wheel to set the first number of IP addres
    3. Press [ENTER] to move on the second number of IP address
    4. Repeat steps 2 and 3 for the third and the fourth number of IP address.

    If you want to return back on the previouly editted number, press [ESC].
- **Set ArtNet Universe** - Select this submenu to set a Universe (0-255). The Universe is a single DMX 512 frame of 512 channels.

9.2 Fixture informations

Use this menu to read an useful information about the fixture.

Power On Time - Select this submenu to read the number of operation hours.

- **Total Hours** - The function shows the total number of the operation hours since the ColorSpot 1200 AT has been fabricated.
- **Resetable Hours** - The function shows the number of the operation hours that the ColorSpot 1200 AT has been powered on since the counter was last reset. In order to reset this counter to 0, press [ENTER] twice.

Lamp On Time - Select this submenu to read the number of the operation hours with the lamp on.

- **Total Hours** - The function shows the total number of the operation hours with the lamp on since the ColorSpot 1200 AT has been fabricated.
- **Resetable Hours** - The function shows the number of the operation hours with the lamp on that the ColorSpot 1200 AT has been powered on since the counter was last reset. In order to reset this counter to 0, press [ENTER] twice.

Lamp Strikes - Select this submenu to read the total number of the lamp strikes.

- **Total Hours** - The function shows the total number of the lamp strikes since the ColorSpot 1200 AT has been fabricated.
- **Resetable Hours** - The function shows the number of the lamp strikes since the counter was last reset. In order to reset this counter to 0, press [ENTER] twice.

Air Filters --- Regular cleaning of the air filters is very important for the fixture´s life and performance.Bildup of dust,dirt and fog fluid residues reduces the fixture´s light output and cooling ability.The two items of this menu help you to keep cleaning peeriod of the air filters.

Set alert period - Cleaning schedule for the fixture depends on the operating enviroment. It is therefore imposible to specify accurate cleaning interval.This function allows you to change the cleaning interval of the air filters.This "alert" value is 50 hours and it is set as default.Inspect the fixture within its 50 hours of operation to see whether cleaning is necessary.If clening is required,clean all air filters and change the value in this menu on acceptable level.Min. level of alert period is 10 hours, max. is 300 hours.

Elapsed Time - The option allows you to read the time which remains to cleaning air filters. The time period is set in the menu mentioned above.
Expired time period is signalized by a negative mark at the time value and a warning icon (triangle) on the display with the following message: "Clean Air Filters"
Clean the filters and reset this menu item (by pressing "Enter" button twice while this menu is highlighted) to start the new time countdown.

Fixture Temperatures - Select this submenu to read the temperatures of the fixture:

Current - Select this function to read the current temperatures of the fixture inside (Board Temp., Ambient Temp.,Near Lamp Temp.)

Maximum nonresetable - The function shows the max.temperatures of the fixture inside (Board Temp., Ambient Temp., Near Lamp Temp.) since the ColorSpot 1200 AT has been fabricated.

Maximum resetable - The function shows the maximum temperatures of the fixture inside (Board Temp., Ambient Temp., Near Lamp Temp.) since the respective counter was last reset. In order to reset desired counter to 0, press [ENTER] twice.

Measurement points:

Board Temp. - temperature on the main board in the fixture base.

Ambient Temp. - temperature of the air which is sucked to the fixture base. This temperature can be different from the real ambient temperature due to e.g. suction of the hot air from the fixture head to the base if the fixture is hanging at the ceiling. Please note that the ambient temperature should not exceed 40°C.

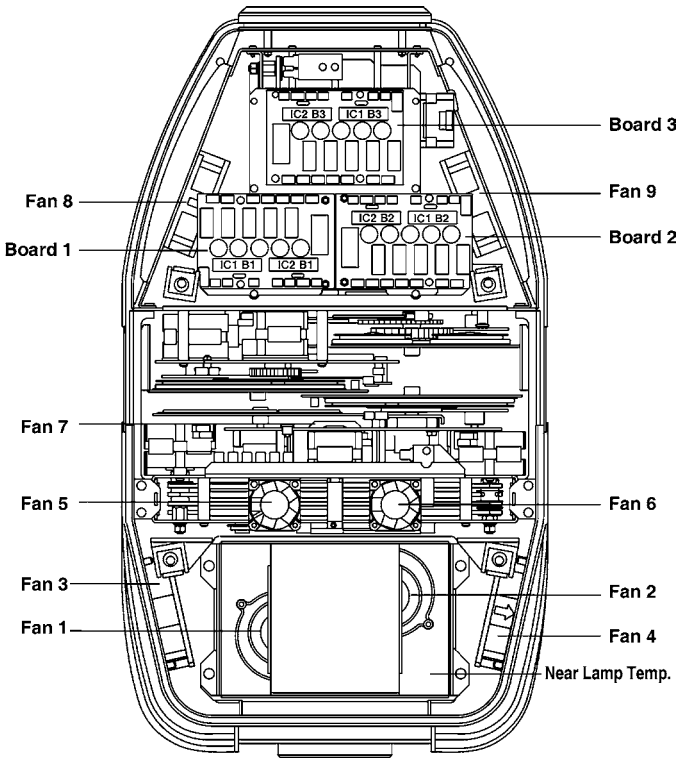
Near Lamp Temp. - temperature in the lamp chamber.

Fans Speed - Select this function to read the actual speed of the fans(speeds per minute):

Fan1 - The fan cools the lamp peak
Fan 3 - The fan on the rear left side of the head
Fan 5 - The left fan at the CMY module
Fan 6 - The right fan at the CMY module
Fan 7 - The Fan iside the head
Fan 9 - The fan on the front right side of the head

Location of the fans:

(Top view)

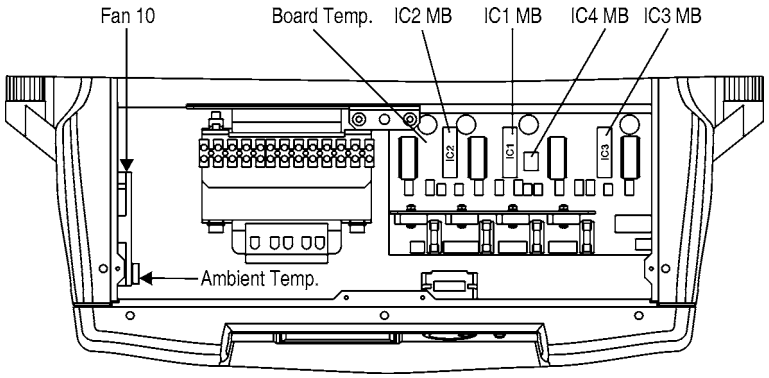


DMX Values - Select this function to read DMX values of each channel received by the fixture.

Product IDs - Select this function to read the MAC address and the RDM UID number
Software Version - Select this function to read the software version of the fixture modules:

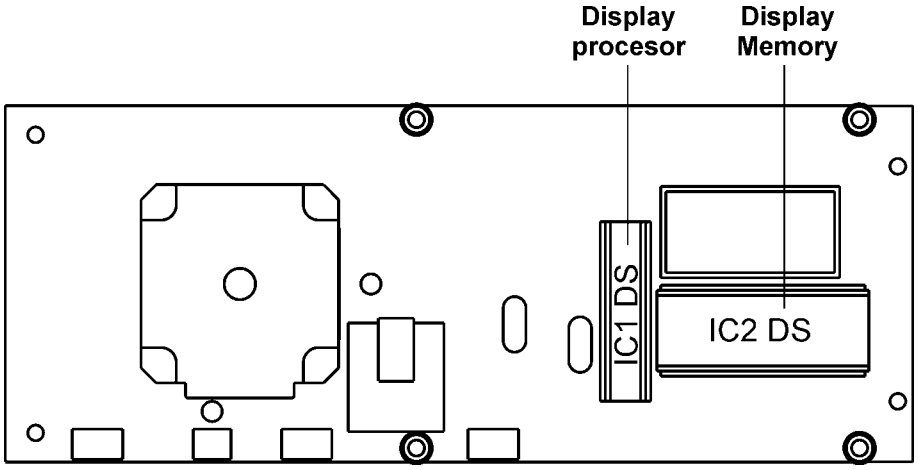
- **IC1 MB** - Main processor on the main board in the fixture base
- **IC2 MB** - Tilt processor on the main board in the fixture base
- **IC3 MB** - Pan procesor on the main board in the fixture base
- **IC4 MB** - EEprom on the main board in the fixture base
- **IC1 B1** - Shutter/conversion filter 3200K processor on the board 1 in the fixture head
- **IC2 B1** - Gobo wheel 1/gobo rotation/colour wheel processor on the board 1 in the fixture head
- **IC1 B2** - CMY processor on the board 2 in the fixture head
- **IC2 B2** - Effect wheel/effect rotation processor on the board 2 in the fixture head
- **IC1 B3** - Zoom/focus/frost processor on the board 3 in the fixture head
- **IC2 B3** - Gobo wheel 2/gobo rotation/iris processor on the board 3 in the fixture head
- **IC1 DS** - Display processor on the display module in the fixture base
- **IC2 DS** - Memory on the display module in the fixture base

Location of the fans, processors and temperature measuring points:
(Top view)



Display module

(Rear view)



9.3 Personality

Use this menu to to modify ColorSpot 1200 AT operating behavior.

User mode - ColorSpot 1200 AT allows you to recall up to 3 user settings. After switching the fixture on for the first time, the **User A settings** are active. All changes made in „Personality" menu, „Fixture Address" menu and Music Trigger and Presetting Playback functions from „Stand-alone setting" menu are saved to the **User A settings**. If you now set the **User B settings** active, from this moment these changes are saved to **the User B settings.** After switching the fixture off and on, the User B setting is active. In this way you may use 3 fixture operating behaviour.

- **User A Settings** - The function recall the user A settings.
- **User B Settings** - The function recall the user B settings.
- **User C Settings** - The function recall the user C settings.

Pan Reverse - Select this function to invert the pan movement.

Tilt Reverse - Select this function to invert the tilt movement.

DMX Preseting - Select this function to set desired effects assigning to the channels. You can choose 2 effects orders (Mode 1-24 channels, Mode 2-32 chanels,Mode 3-24 channels).

Mode 1 - Default channel setting:

Channel	Effect	Channel	Effect
1	Pan	**13**	Gobo Wheel 1
2	Pan Fine	**14**	Gobo 1 Indexing
3	Tilt	**15**	Gobo Wheel 2
4	Tilt Fine	**16**	Gobo 2 Indexing
5	Pan/Tilt Speed	**17**	Effect Wheel
6	Spec. Func.	**18**	Effect Indexing
7	Colour Wheel	**19**	Frost
8	Cyan	**20**	Iris
9	Magenta	**21**	Zoom
10	Yellow	**22**	Focus
11	Conversion Filter	**23**	Shutter/Strobe
12	Effect Speed	**24**	Dimmer

Mode 2

Channel	Effect	Channel	Effect
1	Pan	**17**	Gobo Wheel 1
2	Pan Fine	**18**	Gobo 1 Indexing
3	Tilt	**19**	Gobo 1 F. Indexing
4	Tilt Fine	**20**	Gobo Wheel 2
5	Pan/Tilt Speed	**21**	Gobo 2 Indexing
6	Special Functions	**22**	Gobo 2 F. Indexing
7	Pan/Tilt Macro	**23**	Effect Wheel
8	P./T. Macro Speed	**24**	Effect Indexing
9	Colour Wheel	**25**	Effect F. Index.
10	Cyan	**26**	Frost
11	Magenta	**27**	Iris
12	Yellow	**28**	Zoom
13	Conversion Filter	**29**	Focus
14	CMY Colour Macro	**30**	Shutter/Strobe
15	Effect Speed	**31**	Dimmer
16	Effect Spd Assig.	**32**	Dimmer Fine

Mode 3

Channel	Effect	Channel	Effect
1	Shutter/Strobe	**13**	Gobo 2 F. Indexing
2	Dimmer	**14**	Effect Wheel
3	Cyan	**15**	Effect Indexing
4	Magenta	**16**	Iris
5	Yellow	**17**	Focus
6	Conversion Filter	**18**	Zoom
7	Colour Wheel	**19**	Pan
8	Gobo Wheel 1	**20**	Pan Fine
9	Gobo 1 Indexing	**21**	Tilt
10	Gobo 1 F. Indexing	**22**	Tilt Fine
11	Gobo Wheel 2	**23**	Pan/Tilt Speed
12	Gobo 2 Indexing	**24**	Spec. Func.

Please refer to the chapter „DMX - protocol" for detail description.

Lamp Presetting - Select this menu to change the lamp „behaviour".

Lamp On/Power On - Select this function to turn the lamp on automatically after switching the fixture on.
Lamp Off via DMX - Select this function to switch off the lamp via DMX.
Lamp On if DMX Present - This function allows you to strike the lamp automatically after 26 seconds if DMX signal is present on the data link.If the ignition is unsuccessfull (e.g.lamp is too hot), the fixture will try to ignite the lamp after next 26 s. This process will repeat until the lamp lights.
Lamp Off if not DMX - This function allows you to switch Off the lamp automatically after 2 minutes if DMX signal is missing on the data link.
Lamp Ignition Delay - This function allows you to set the time delay(0-90s) before the lamp will be ignited. This setting will not affect starting the lamp direct from the control panel (menu "Lamp On/Off").
Lamp Low Power Delay - This function enables set the time period after that the lamp power will be reduced if the shutter/dimmer is closed.The delay time can be set up to 600seconds.Default setting is10s.

Lamp Light Sensor - Select this function to switch the lamp light sensor on or off. The option „On" is for the standard operation.
Important: The option „Off" is for „emergency operation" only if the lamp light sensor is defective and you will wait for a service intervertion! If the lamp light sensor is switched off and at switching the lamp on the electronics will still try to ignite the lamp until it shines (even when the lamp is damaged or absent), on this account some electronics parts could be damaged!

Display Adjusting - This function allows you to change the display settings.
Display Permanent On - This function allows you to keep the display on or to turn off automatically 2 minutes after last pressing any button(or a wheel movement) on the control panel.
Display Intensity - Select this function to adjust the display intensity (1-min.,10-max.).
Display Backlight - Select this function to adjust the display backlight (1-min.,10-max.).
Display Turned - Select this function to turn the display by 180°.

Blackout d.M.C. - Select this function to enable the blackout during the head movement correction (if the moving head lost its right pan/tilt position for a short moment).

Pan/Tilt Feedback - This function allows to return the mowing head to the required pan/tilt position after changing the position by external force (e.g.by stroke).
Be careful, the Pan/Tilt Feedback OFF is not the standard operation and the head of the fixture can be demaged!
Note: If the feedback was switched off, the pan/tilt-position is changed by an external force and the feedback is switched on again, the moving head might not to be synchronized with the DMX signal. You have to make a reset in order to synchronize the moving head with the DMX signal.

Microphone Sensitivity - Select this function to adjust the microphone sensitivity from 1(maximum) to 20 (minimum). If the sensitivity is correctly adjusted, the mark will appear (blinking in the bass beat.)

Fan Modes - By using this function you can choose 2 types of the fan speed operating modes.
Auto Cooling - The fans automatically raise their speed in order to control inside temperature of the lighting, if the temperature inside increases about certain level (the low fan speed reduces the cooling of the lighting). This cycle can repeat several times until the temperature inside is on a suitable level.
High Cooling - The cooling fans work on max. speed (max. cooling). This mode we recommend for high ambient temperature (30 °C and more).

Autofocus - The function improves the image on the wall if the zoom changes (its effect is the best for gobos from gobo wheel 2 and for distance cca 6 m). If you want to focus the image on the long distance (more than 15 m), this function should be set off.

Pan/Tilt mode - Use this menu to set the character of the pan/tilt movement.
Time mode - Pan and tilt will move with different speeds and they will come at the same time to end point (pan and tilt sets its optimal speed).
Speed Mode - Pan and tilt will move with the same speed as adjusted by the channel 5 (Pan/Tilt speed). E.g. pan will come to the end point and wait for tilt, which has longer track.

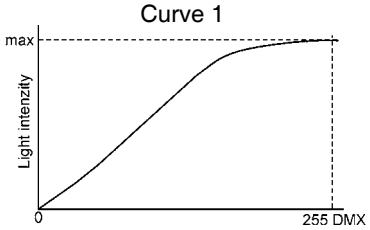
Active Blackout while: - Use this function if you wish to close the light output during effect changes.
Pan/Tilt Moving - This function closes the light output during pan/tilt changes.
Colour Wheel Moving - This function closes the light output during colour changes.
Gobo Wheels Moving - This function closes the light output during gobo wheel 1/gobo wheel 2 changes.

IR Sensor - Select this function to switch on/off infra-red remote control**.**

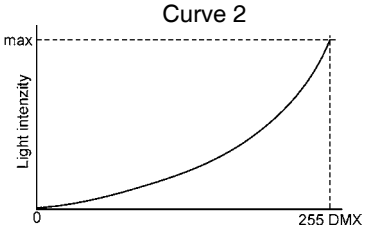
Init Effect Positions - Select this function to set all effects to the desired positions. After switching the fixture on (if DMX is not connected), all effects will move to this init positions.
Note: If you operate 24 channels pre-setting (Mode 1) and you adjust DMX values for channels which are not included in this mode, you will not be able to change these effects from the controller !
For example: You operate the Mode 1 and in „Init Effect Positions" menu is adjusted **CMY Colour Macro =150,** this value shoud be 0 or you will not abble to control cyan, magenta and yellow because these effects are used in CMY macros and the macros have a priority.

Dimmer Curve - Select desired dimmer running.

Curve 1



Curve 2



CMY-CTF Speed - Select this option to select desired speed of movement of CMY and CTF lamelas:Standard speed or High speed.Default setting is High Speed.

Focus/Zoom Curve - Compatible - The behaviour of focus/zoom module is compatible with previous versions of the Colorspot 1200 AT/1200E AT.
New - Increases possibilities of focus/zoom module.

Temperature Unit --- Select this menu in order to display fixture temperatures in °C or °F.

Default Settings - Select this option to reset all fixture personalities to the default values.

9.4 Lamp On/Off

Use this option in order to switch on/off the lamp. It is also important to note, that the lamp is cold restrike type, that means, that it has to be cold before striking.

9.5 Test sequences

Use this menu to to run a special demo-test sequences without an external controller, which will show you some possibilities of using ColorSpot 1200 AT.

Mode 1 - This mode is suitable for projections on the wall, ceiling or ground without any head movement.
Mode 2 - This mode uses all ColorSpot 1200 AT functions including pan/tilt movement and therefore is good for a complete introduction of the fixture.

9.6 Manual mode

Presetted Effects - Select this menu to call up presetted positions of channel effects.
Manual Effect control - Select this menu to control channels by control elements on the control board.

9.7 Stand-alone setting

Use this menu to set options for stand-alone mode as a selection of the playing program,programming and modifying current programs.

Music Trigger - Select this function to enable the sound control of the running programs via the built-in microphone.
Presetting Playback - This function allows you to select the program which will be played in the stand-alone mode after switching the fixture on.Selected program will be played continuously in a loop.

Disabled - The option disables „Presetting playback" function.
Test Program - The option will start built-in test program.
Program 1 - The option will start created program No.1
Program 2 - The option will start created program No. 2
Program 3 - The option will start created program No. 3

Note: If the fixture operates in the controller mode (DMX controller is connected) and any program from this menu is selected, in this case the fixture will not respond to the DMX controller after switching on and will play selected program.

Playing program -Select this menu to run a built-in program or the 3 freely-programmable programs in a loop.

Test Program In Loop - The option starts built-in test program.
Program 1 In Loop - The option starts created program No. 1
Program 2 In Loop - The option starts created program No. 2
Program 3 In Loop - The option starts created program No. 3

Select the program you wish and press [ENTER]. The selected program starts running. By Pressing [ENTER] again is possible to pause the program running.

Editing Program - Select this menu to edit or create the program. The ColorSpot 1200 AT has one built-in program and the 3 free programs, each up to 99 steps. Each program step has a step time.
Step time-the time, during which effects last in the current step.

Procedure:
1. Select the program you want to edit („Program 1" - „Program 3") and press [ENTER].
2. Select „Edit Steps" menu and press [ENTER].
3. Select the desired program step („Step 01" - „Step 99") and press [ENTER].
4 Select the desired item and press [ENTER]. Now you can edit DMX value for selected item:

"Pan"- a coarse pan, value 0-255
"Pan Fine" - a fine pan, value 0-255

"Tilt" - a coarse tilt, value 0-255
"Tilt Fine" - a fine tilt, value 0-255
"Pan/Tilt Speed " - a speed of pan/tilt movement, value 0-255
"Spec. Func." - a special functions, lamp on/off, reset, value 0-255
"Pan/Tilt Macro" - a pan/tilt macro, value 0-255
"P./T.Macro Speed" - a pan/tilt macro speed, value 0-255
"Colour Wheel" - a colour wheel, value 0-255
"Cyan" - a cyan, value 0-255
"Magenta" - a magenta, value 0-255
"Yelow" - an yellow, value 0-255
"Conversion Filter" - a conversion temperature filter, value 0-255
"CMY Colour Macro" - a CMYcolour macro, value 0-255
"Effect Speed" - a effect speed, value 0-255
"Effect Speed. Assig." - a effect speed assigning,value 0-255
"Gobo Wheel 1" - a rotating gobo wheel 1, value 0-255
"Gobo 1 Indexing" - a gobo 1 - coarse indexing and rotation, value 0-255
"Gobo 1 F. Indexing " - a gobo 1 - fine indexing and rotation, value 0-255
"Gobo Wheel 2" - a rotating gobo wheel 2, value 0-255
"Gobo 2 Indexing" - a gobo 2 - coarse indexing and rotation, value 0-255
"Gobo 2 F. Indexing " - a gobo 2 - fine indexing and rotation, value 0-255
"Effect Wheel " - an effect wheel and prism/gobo macro, value 0-255
"Effect Indexing" - an effect - coarse indexing and rotation, value 0-255
"Effect F. Index. " - an effect - fine indexing and rotation, value 0-255
"Frost" - a frost, value 0-255
"Iris" - an iris, value 0-255
"Zoom" - a zoom, value 0-255
"Focus" - a focus, value 0-255
"Shutter/Strobe" - a shutter and strobe,value 0-255
"Dimmer" - a dimmer intensity-coarse, value 0-255
"Dimmer Fine" - a dimmer intensity-fine, value 0-255

5. Select „Save" or „Save and Copy" and press [Enter] to confirm adjusted values:
"Save" - saving the current prog. step
"Save and Copy" - saving and copying the current prog. step to the next prog. step.
6. Go on next prog. step and repeat this procedure (steps 4 and 5).
After creation the program, you can simply reduced its length (by changing the start/end steps) using the „Start Step" and „End Step" menu.

9.8 Reset functions

The ColorSpot 1200 AT can be reset totally or by function modules. Select relevant function to run a reset:
Reset All - This function enables the fixture to index all effects and return to their standard positions.
Pan/Tilt - This function resets pan and tilt.
Colour System - This function resets colour wheel and CMY/conversion filter module.
Gobo System - This function resets both rotating gobo wheels 1 and 2.
Dimmer/Strobe - This function resets dimmer/strobe module.
Focus/Zoom/Frost - This function resets focus,zoom and frost.
Iris/Effect - This function resets iris and effect wheel.

9.9 Special functions

Use this menu for special services like adjusting lamp or adjusting effects.
Lamp Adjustment - This function can be used when you make the fine adjustment of the lamp. If you select this function, all effects will be canceled, shutter will be opened and the dimmer intensity will be set onto 100%. By using the options **„PAn, Tilt, Zoom, Focus"** you can focus the light on a flat surface (wall) and perform the fine lamp adjustment.
Effect Adjustment - By this function you can calibrate and adjust the effects to their standard/right positions. Disconnect the DMX controller from the fixture and select **„DMX Values"** menu. The display shows step by step effects by which you can adjust the fixture to the required position before the function calibration. When the positioning is finished, select **„Calibrate Values"** and press [ENTER]:

1. Calibration via the control board
Select desired effect, press [ENTER] and adjust its right value (0 - 255). This can be repeated for each calibred effect if it is required. When the calibration is finished, it is necessary to use the **„Save and Reset"** function to write the calibration values to the memory and to make a reset in order to check the newly adjusted positions of the calibrated effects.
List of the calibrated effects:

Pan	Yellow	Gobo 2 Indexing
Tilt	Conversion Filter	Effect Wheel
Colour Wheel	Gobo Wheel 1	Effect Indexing
Cyan	Gobo 1 Indexing	Iris
Magenta	Gobo Wheel 2	Dimmer

2. Calibration via the DMX controller

Connect the DMX controller to the fixture. Select desired effect and press [ENTER]. Now you can calibrate the selected effect by your controller.
DMX calibration protocol for Mode 1and Mode 3 (24 control channels):

Pan ..... channel 25	Yellow ..... channel 30	Gobo 2 Indexing ..... channel 35
Tilt ..... channel 26	Conversion Filter ... channel 31	Effect Wheel ..... channel 36
Colour Wheel ... channel 27	Gobo Wheel 1 ..... channel 32	Effect Indexing ..... channel 37
Cyan ..... channel 28	Gobo 1 Indexing ....channel 33	Iris ..... channel 38
Magenta ..... channel 29	Gobo Wheel 2 ..... channel 34	Dimmer ..... channel 39

DMX calibration protocol for Mode 2 (32 control channels):

Pan ..... channel 33	Yellow ..... channel 38	Gobo 2 Indexing ..... channel 43
Tilt ..... channel 34	Conversion Filter ... channel 39	Effect Wheel ..... channel 44
Colour Wheel ... channel 35	Gobo Wheel 1 ..... channel 40	Effect Indexing ..... channel 45
Cyan ..... channel 36	Gobo 1 Indexing .... channel 41	Iris ..... channel 46
Magenta ..... channel 37	Gobo Wheel 2 ..... channel 42	Dimmer ..... channel 47

After having calibrated required effects ,use the **„Save and Reset"** function to write the calibration values to the memory and to make a reset in order to check the newly adjusted positions of the calibrated effects.
Item **„Load Default Values"** enables to load default factory calibration values.

Updating software - This option is available in the fixture with software version 3.0 or higher.Using this function you can update software in the fixture via PC and serial link.
The following are required in order to update software:
- PC running Windows 95/98/2000/XP or Linux
- DMX Software Uploader
- Flash cable RS232/DMX (No.13050624)

Note1:Software update should execute a qualified person.If you lack qualification, do not attempt the update yourself and ask for help your ROBE distributor.
Note 2:DMX address, IP address ,programs 1-3 and all functions in menu Personality will be set to their default values.

To update software in the fixture:
1.Installation of DMX Software Uploader.
1.DMX Software Uploader program is available from the ROBE web site at WWW.robe.cz.
2.Make a new directory (e.g. Robe_Uploader) on your hard disk and download the software to it.
3.Unpack the program from the archive. Program file has name:DSU_name of corresponding fixture_SoftwareID.If the Robe fixture is produced in magnetic and electronic ballast version, name of DMX Software Uploader is the same for both versions.SoftwareID describes the versions of fixture software included in DMX Software Uploader. Higher number means later software versions.
2.Fixture software updating.
1.Determine which of your COM port is available on your PC and connect it with to the DMX input of the fixture using the Flash cable. Do not extend this cable! Disconnect the fixture from the other fixtures in DMX chain! Turn on the computer and the fixture. Make sure that the lamp is switched off.
2.Switch the fixture to the update mode by selecting the option Updating Software in menu Special Functions on the fixture control panel.(From this option you cannot return back to the main menu. If you do not want to continue in software update, you have to switch off and on the fixture to leave this option!)
3.It is recommended that you exit all programs before running this Software Uploader.
4.Start the Software Uploader program. Select desired COM and then click Connect button.
If the conection is OK, click Start Uploading button to start uploading. It will take several minutes to perform software update.If the option "Incremental Update"isn´t checked ,all processors will be updated (including processors with the same software version).
If you wish to update only later versions of processors, enable the Incremental Update check box.
Avoid interrupting the process. Update status is being displayed in the list window.
When the update is finished, the line with the text "The fixture is successfuly updated' will appear in this window and the fixture will reset with the new software.
Note: In the case of interruption of the upload process (e.g. power cut), the fixture remains in the update mode and you have to repeat the software update again.
For example: The fixture was switched off before finishing software upload. After switching the fixture on again, the fixture is still in the update mode and the display is dark. Restart the Software Uploader program and repeat software update from your PC.

10. Power down mode

This mode omits fixture reset after switching the fixture on and reduces motor powers of the fixture."Power down mode" is useful in special cases e.g. if the fixture is in a flight case and you want to set its DMX address without taking it out from the case.To enter "Power down mode":
Press and hold [ENTER] and at the same time switch on the Power switch.The following message appears:

Realy Skip Initial Reset?
Escape/Enter

Press [ENTER] to activate "Power down mode" without fixture reset.Now you can set features and behaviour of the fixture by using "Fixture Address"menu and "Personality" menu.It is expected,that this mode will be exited by switching the fixture off ,but if you want to go directly to "normal operation mode",execute any fixture reset.

Note: All motors in “Power down mode” are deactivated and switching the lamp on from the control panel is blocked.

11. RDM

This fixture supports an RDM operation. The RDM (Remote Device Management) is a bi-directional communications protocol for use in DMX512 control systems, it is the new open standard for DMX512 device configuration and status monitoring. The RDM protocol allows data packets to be inserted into a DMX512 data stream without adversely affecting existing non-RDM equipment. By using a special „Start Code,“ and by complying with the timing specifications for DMX512, the RDM protocol allows a console or dedicated RDM controller to send commands to and receive messages from specific moving lights.

The ROBE DreamBox with an additional ROBE RDM-network software provides the RDM functionality. The DreamBox supports RDM - new control protocol featuring AutoPatch and Fixture Status Monitoring.

The list of RDM commands for ColorSpot 1200/1200E AT is the following:

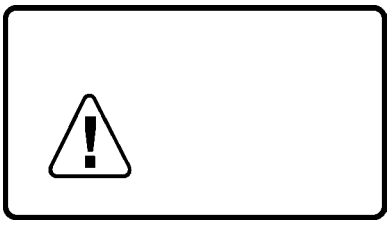
Parameter ID	Discovery command	SET command	GET command
DISC_UNIQUE_BRANCH	*		
DISC_MUTE	*		
DISC_UN_MUTE	*		
DEVICE_INFO			*
SUPPORTED_PARAMETERS			*
SOFTWARE_VERSION_LABEL			*
DMX_START_ADDRESS		*	*
IDENTIFY_DEVICE		*	*
DEVICE_MODEL_DESCRIPTION			*
MANUFACTURER_LABEL			*
DEVICE_LABEL		*	*
SENSOR_DEFINITION			*
SENSOR_VALUE			*
DISPLAY_INVERT		*	*
DISPLAY_LEVEL		*	*
PAN_INVERT		*	*
TILT_INVERT		*	*
DEVICE_RESET		*	
DMX_PERSONALITY		*	*
DMX_PERSONALITY_DESCRIPTION			*
STATUS_MESSAGES			*
STATUS_ID_DESCRIPTION			*
LAMP_STATE		*	*
LAMP_ON_MODE [1]		*	*
DEVICE_HOURS [2]			*
LAMP_HOURS [2]			*
LAMP_STRIKES [2]			*

[1]...Another options for this command (only for Robe´s fixtures):
value PARAMETER_DATA=0x84 - lamp OFF by DMX value on DMX channel
value PARAMETER_DATA=0x88 - lamp OFF if DMX is not present

[2]...Commands relative resetable values

12. Error and information messages

Occured errors during fixture operation are signalized by warning icon on the display:



Press [ESC] to see the current error messages.

Description of the error messages:

Active Lamp Timer

This message appears if you try to switch on the lamp within 5 minutes after having switched it off (the lamp is too hot). The message will appear on the display if the lamp doesn't ignite within 28 seconds. The ColorSpot 1200 AT will store this information and automatically ignite the lamp when the 5 minutes period has expired.
Caution: The message is disabled if the lamp light sensor (function „Lamp Sensor" in menu Personality) is switched Off.

Lamp Error

The ignition of the lamp is seven times unsuccessful (the "*Active Lamp Timer*" message appeared six times before), and the display shows "*Lamp Error*", meaning that the lamp could be damaged or even missed or there could be a failure on the ignitor or ballast.
Please place or replace the lamp and contact your dealer if the situation was not caused by the lamp.
Caution: The message is disabled if the lamp light sensor (function „Lamp Sensor" in menu Personality) is switched off.

Overheated ->Lamp low

This message informs that the fixture head is overheated and the lamp power was reduced to 700 W.After 10 minutes the lamp power will be switched to the full power.

Overheated ->Lamp Off

This message informs that the fixture head is overheated and the lamp was switched off by its temperature sensor.

Lamp Sensor Error

This message informs the lamp light sensor is failed.
Caution: The message is disabled if the lamp sensor (function Lamp Sensor in menu Personality) is switched Off.

Short Power Error

This message will appear if the fixture was shortly disconnected from the main.

Supply Frequency Error

This message will appear if the frequency of the main is not standard 50 or 60 Hz.This message can appear as a result of the interference during the lamp starting (if the lamp or igniter is old) or as a result of the interference by neighbouring devices. **In these cases the message does not affect the fixture operating!**

The following error messages are separated into 2 groups:
xxxx xxxx Error 1 (e.g. *Colour Wheel Error 1*, Gobo 2 Index Error 1)
xxxx xxxx Error 2 (e.g. Colour Wheel Error 2, Gobo 2 Index Error 2)
There are some possible reasons of faults:

Message	**Characteristic fault**
xxxx xxxx Error 1	Magnetic sensor is permanently On (e.g. leading wire is short-circulated,defective stepping motor, defective control circuit on the PCB)
xxxx xxxx Error 1/xxxx xxxx Error 2 (together)	Magnetic sensor is permanently Off (e.g. leading wire is disconnected, defective magnetic sensor, missing magnet), defective stepping motor.

Colour Wheel Error 1 (Colour Wheel Error 2)

The messages will appear after the reset of the colour wheel if this wheel is not located in the default position.

Gobo 1 Wheel Error 1 (Gobo 1 Wheel Error 2)

The messages will appear after the reset of the gobo wheel 1 if this wheel is not located in the default position.

Gobo 1 Index Error 1 (Gobo 1 Index Error 2)

The messages will appear after the reset of the gobo wheel 1 if the rotating gobo wheels are not located in the default positions.

Gobo 2 Wheel Error 1 (Gobo 2 Wheel Error 2)
The messages will appear after the reset of the gobo wheel 2 if this wheel is not located in the default position.

Gobo 2 Index Error 1 (Gobo 2 Index Error 2)
The messages will appear after the reset of the gobo wheel 2 if the rotating gobo wheels are not located in the default positions.

Effect Wheel Error 1 (Effect Wheel Error 2)
The messages will appear after the reset of the effect wheel if this wheel is not located in the default position.

Effect Index Error 1 (Effect Index Error 2)
The messages will appear after the reset of the effect wheel if the rotating effect wheels are not located in the default positions.

Iris Error 1 (Iris Error 2)
The messages will appear after the reset of the iris if the iris lamellas are not located in the default positions.

Cyan Lamella Error 1 (Cyan Lamella Error 2)
The messages will appear after the reset of the CMY module if the cyan lamellas are not located in the default positions.

Magenta Lamella Error 1 (Magenta Lamella Error 2)
The messages will appear after the reset of the CMY module if the magenta lamellas are not located in the default positions.

Yellow Lamella Error 1 (Yellow Lamella Error 2)
The messages will appear after the reset of the CMY module if the yellow lamellas are not located in the default positions.

CTO Lamella Error 1 (CTO Lamella Error 2)
The messages will appear after the reset of the CTO module if the CTO lamellas are not located in the default positions.

Zoom Error 1 (Zoom Error 2)
The messages will appear after the reset of the zoom module if the module is not located in the default position.

Focus Error 1 (Focus Error 2)
The messages will appear after the reset of the focus module if the module is not located in the default position.

Pan Error 1 (Pan Error 2)
The messages will appear after the reset of the yoke if the yoke is not located in the default position.

Tilt Error 1 (Tilt Error 2)
The messages will appear after the reset of the head if the head is not located in the default position.

13. Technical specifications

Power supply:

Magnetic ballast - ColorSpot 1200 AT:

Voltage: ..... 208/230/250V AC, 50/60Hz ~
Main fuses: Live fuse: ..... T10A@230V
Neutral fuse: .... T10A@230V

Electronic ballast - Colorspot 1200E AT:

Voltage: ..... 100/120/208/230/250V AC, 50/60Hz ~
Main fuses: Live fuse: ..... T10A@230V
Neutral fuse: .... T10A@230V
Live fuse: ..... T20A@120V
Neutral fuse: .... T20A@120V
Power consumption: ..... 1600 VA

Lamp:

Philips MSR 1200 SA, base: GY22, colour temperature: 5600 K, average lamp life: 750 h

Optical System:

- High luminous-efficiency parabolic reflector
- Focus lens and multistep zoom lenses system
- Beam angle: 13°- 42°
- All lenses are anti-reflection coated

CMY-colours mixing module

- Smooth CMY colour mixing system
- Colour temperature correction filtre lowers the colour temperature from 5600K to 3200 K
- 63 colour macros

Colour wheel

- 4 dichroic filters, UV filter, 6000K temp. filter plus white
- Colour wheel with variable rotation speed in both directions
- All colour-modules are interchangeable
- Random colour selection by audio control
- Auto random colour selection

Rotating gobo wheel 1

- 6 replaceable dichroic glass gobos plus an open position rotating in both directions at different speeds
- Fine gobo indexing and rotation
- Rotating gobo-wheel cont. rotation
- Shaking gobos with variable speed
- Random gobo selection by audio
- Auto random gobo selection
- Dichroic glass gobos: outside diameter= 37.3 mm, image diameter =31.5 mm, high temperature borofloat or better glass, thickness=1.1mm up to 5 mm, coating: dichroic or enhanced aluminium

Rotating gobo wheel 2

- 6 replaceable gobos (1glass gobo,5 dicroic glass gobos plus an open position) rotating in both directions at different speeds
- Fine gobo indexing and rotation
- Rotating gobo-wheel cont. rotation
- Shaking gobos with variable speed
- Random gobo selection by audio
- Auto random gobo selection
- Rotating gobo-wheel cont. rotation
- Dichroic glass gobos: outside diameter= 37.3 mm, maximum image diameter=31.5 mm, high temperature borofloat or better glass, thickness=1.1mm up to 5mm, coating: dichroic or enhanced aluminium - Glass gobo: outside diameter= 37 mm, high temperature borofloat or better glass, thickness=1.1mm up to 5 mm

Effect wheel

- 3-facet prism, 5-facet prism and 2 glass effects rotating in both directions at different speeds.
- Prism outside diameter= 46,8 mm
- Fine prism indexing and rotation
-16 Prism/gobo macros

Strobe

- Strobe effect with variable speed (1 - 15 flashes per second)
- Preprogrammed macros with variable/random pulse effects

Dimmer

- Smooth micro-step driven dimming

Frost

- Separate variable frost for fine frosting

Focus/Zoom

- Remotely controllable motorized focus
- Motorized zoom with range 13°- 42°

Iris

- Motorized (steplessly adjustable) iris for different beam diameters

Motors

- 17 high quality stepping-motors controlled by microprocessors

Electronics

- control via control panel with graphic LCD display and 2 buttons/rotating wheel
- Readout fixture and lamp usage,receiving DMX values, temperature, etc
- Built-in analyzer for easy fault finding,error messages
- Remotely switching on/off the lamp by DMX

- Bilt-in demo sequences
- Silent fans cooling
- Stand alone operation
- Self-resetable thermo-fuse
- Digital serial input DMX-512
- Ethernet connector
- Magnetic or electronics ballast
- 3 control-channels presettings (24 and 32 control channels)
- Suport RDM

Data input/output

- 3-pin and 5-pin XLR male sockets for DMX data input
- 3-pin and 5-pin XLR female sockets for DMX data output
- RJ- 45 male socket for Ethernet connection

Pan/Tilt

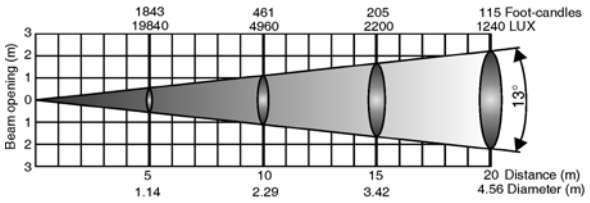
- Pan movement range 530°
- Tilt movement range 280°
- 16 bit movement resolution
- Automatic Pan/Tilt position correction
- Remotely controllable speed of Pan/Tilt movement for easy programming
- Maximum Pan movement 530° in 4,5 s
- Maximum Tilt movement 280° in 2,6 s

Rigging

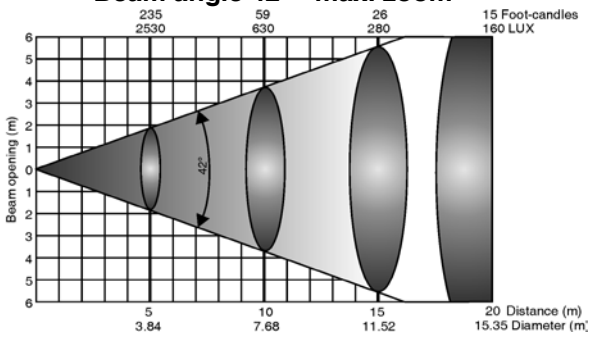
- Stands directly on the floor
- Mounts horizontally or vertically with 2 clamps
- fastening of the clamp brackets in 4 positions
- Safety chain/cord attachment apertures

Bempath

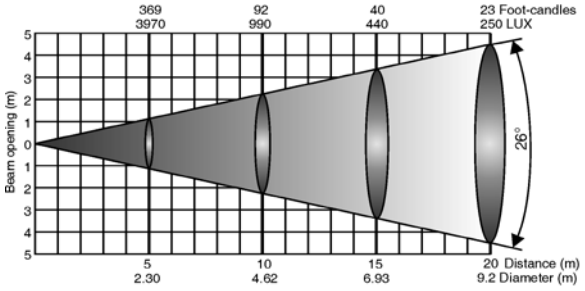
Beam angle 13°- min. zoom



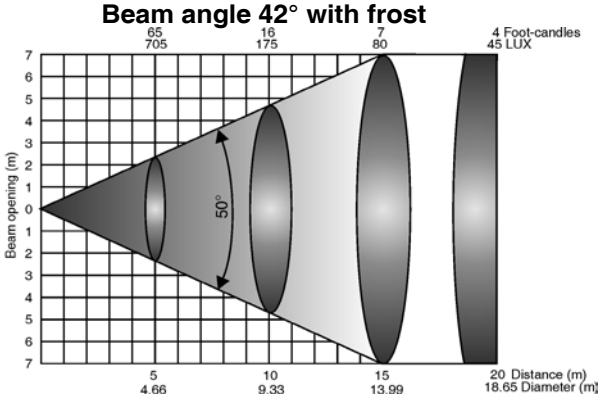
Beam angle 42° - max. zoom



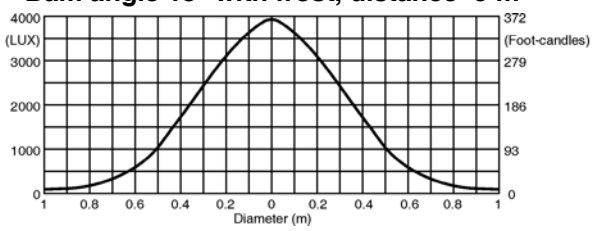
Beam angle 13° with frost



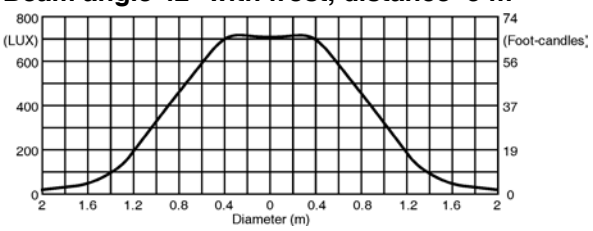
Beam angle 42° with frost



Bam angle 13° with frost, distance=5 m



Beam angle 42° with frost, distance=5 m



Tempeatures

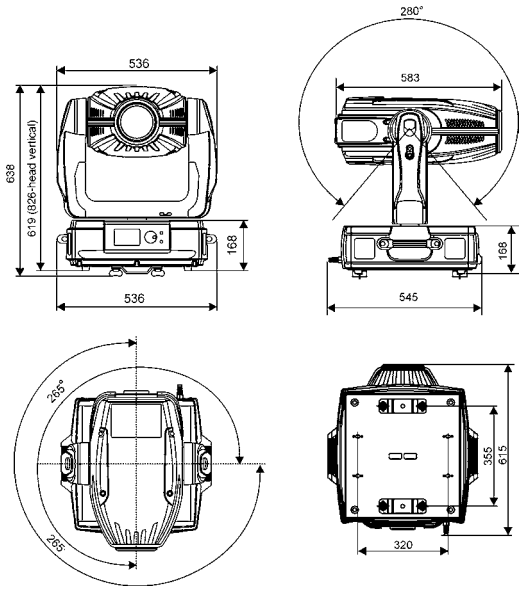
- Maximum ambient temperature: 40° C
- Maximum housing temperature of the head: 130° C

Minimum distances

- Min. distance from flammable surfaces: 1.2 m
- Min. distance to lighted object: 2 m

Dimensions and weight

- Weight - Colorspot 1200 AT (magnetic ballast): 51,5 kg
- Weight - Colorspot 1200E AT (electronic ballast): 42 kg



Accessories:

Gobo-set 10 (No. 15050019) ..... 1 piece
Mounting bracket Omega CL assembled (No. 99010420) ..... 2 pieces

Optional acesories:

Remote control IR (No. 13050419)
Flash Cable RS232/DMX (No. 13050624)

14. Maintenance and cleaning

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build up on or within the fixture. Otherwise, the fixture‘s light-output will be significantly reduced. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to function reliably throughout its life.
A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

DANGER ! Disconnect from the mains before starting any maintenance work

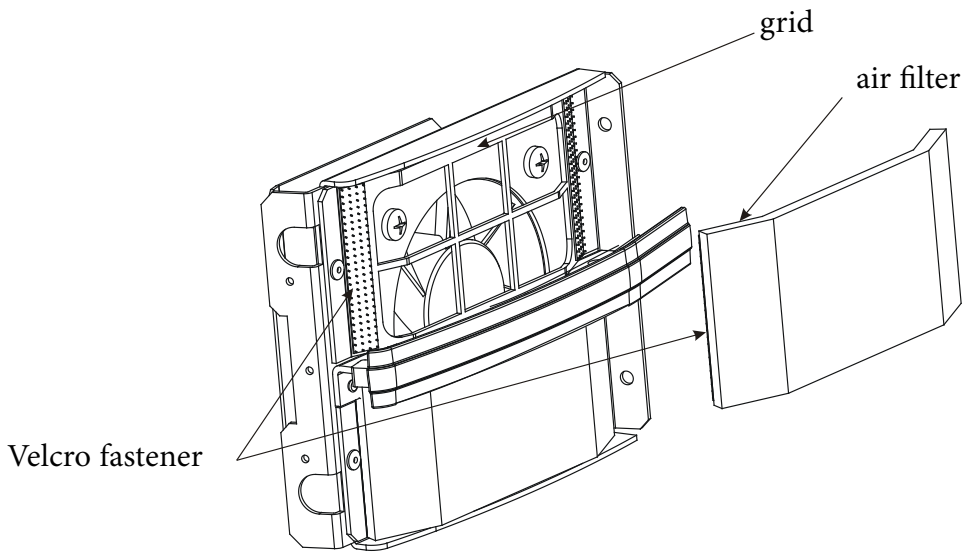
The front objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light-output very quickly. The cooling-fans should be cleaned monthly.
The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet.
Dichroic colour filters, CMY lamelas,gobo wheels and the internal lenses should be cleaned monthly.
Remove dust and dirt from the fans and cooling vents using a soft brush and vacuum-cleaner.

Important! Check the air filters periodically and clean before they become clogged!

Clean the air filters from the front fans with a vacuum cleaner, compressed air or you can wash them and put back dry.

Replacing the air filters.

1)Disconect the fixture from power.
2)Remove both top and bottom cover of the head (by loosening the 4 quarter-turn fasteners on each cover)
3)Remove the air filters (they are fixed with a velcro fastener) from grids.
4)Clean or replace the air filters.
5)Place the filters on the grid and put head cover back.
6)Reset the elapsed time counter in menu Fixture information (Fixture Information--->Air Filters---> Elapsed Time.



There are no serviceable parts inside the device except for the lamp and the main fuse.
For replacing lamp,please refer to the instructions under „Fitting/Exchanging the lamp”.

Replacing the fuse
If the lamp burns out, the fine-wire fuse of the device might fuse, too. Only replace the fuse by a fuse of the same type and rating.
Before replacing the fuse, unplug mains lead.

Procedure:

1) Unscrew the fuseholder on the rear panel of the base with a fitting screwdriver from the housing (anti-clockwise).
2) Remove the old fuse from the fuseholder.
3) Install the new fuse in the fuseholder.
4) Replace the fuseholder in the housing and fix it.

More complicated maintenance and service operations are only to be carried out by authorized dealers.

Specifications are subject to change without notice.